Management Plan Update – Overview & Chapter Introduction Components

REDLINE of 1995 Plan based on comments received and Commission discussions considered through May 21, 2009

Recommended Changes and General Comments (Received post May 21, 2009)

Recommended language prepared by staff pursuant to discussions of the MPU document review subcommittee and in consideration of recommended changes and general comments received post May 21, 2009

Introduction

The Primary Zone of the Sacramento-San Joaquin Delta (Delta) includes approximately 500,000 acres of waterways, levees and farmed lands extending over portions of five counties: Solano, Yolo, Sacramento, San Joaquin and Contra Costa. The rich peat soil in the central Delta and the mineral soils in the higher elevations support a strong agricultural economy. The Delta lands currently have access to the fresh waters of the 1,000 miles of rivers and sloughs lacing the region. These waterways provide habitat for many aquatic species and the uplands provide year-round and seasonal habitat for amphibians, reptiles, mammals, and birds, including several rare and endangered species. The area is extremely popular for many types of water-oriented recreation including fishing, boating, and water-skiing, swimming, hiking, and biking.

Recognizing the threats to the Primary Zone of the Delta from potential urban and suburban encroachment and the need to protect the area for agriculture, wildlife habitat, and recreation uses, the California Legislature passed and the Governor signed into law on September 23, 1992, the Delta Protection Act of 1992 (SB 1866). The Act directs the Delta Protection Commission to prepare a comprehensive resource management plan for land uses within the Primary Zone of the Delta (Plan).

The planning conducted by the Delta Protection Commission involved preparation and public review of nine background reports: Environment; Utilities and Infrastructure; Land Use and Development; Water; Levees; Agriculture; Recreation and Access; Marine Patrol, Boater Education, and Safety Programs; and Implementation. These reports provided the information base for the Plan findings and policies, as well as allowing opportunities for public review and comment through circulation and public hearings before the Commission.

The goals of the Plan as set out in the Act are to "protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities; assure orderly, balanced conservation and development of Delta land resources and improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety." Also pursuant to the Act, to the extent that any of the requirements specified in this Land Use and Resource Management Plan are in conflict, nothing in this Plan shall deny the right of the landowner to continue the agricultural use of the land.

DWR:

Comment: Recommend first paragraph under Implementation section be inserted here.

DFG:

The area is extremely popular for many types of recreation including fishing, boating, <u>hunting</u>, <u>birdwatching</u>, water-skiing, swimming, hiking, and biking.

DWR:

Comment: This paragraph appears to apply to the first plan. The introduction should include a description of the development of the updated plan.

DWR:

These reports provided the information base for the Plan findings and policies, as well as allowing opportunities for public review and comment through public circulation and public hearings before the Commission.

The Delta Protection Act of 1992 (Act) established the Delta Protection Commission, a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta, while sustaining agriculture and meeting increased recreational demand. The Act defines a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Secondary Zone is the area outside the Primary Zone and within the "Legal Delta"; the Secondary Zone is not within the planning area of the Delta Protection Commission. The Act requires the Commission to prepare and adopt a Land Use and Resource Management Plan for the Primary Zone of the Delta, which must meet specific goals. This document constitutes the Land Use and Resource Management Plan for the Primary Zone of the Delta (Plan), as adopted in 1995 and updated in 2009.

The Act (Public Resources Code Section 29760 et. seq.) requires the Commission to prepare and adopt, and thereafter review and maintain, a comprehensive long-term resource management plan for land uses within the Primary Zone of the Delta ("resource management plan"). The resource management plan is to set forth a description of the needs and goals for the Delta and a statement of the policies, standards, and elements of the resources management plan. Within 180 days of the adoption of the resource management plan or any amendments by the Commission, all local governments, as defined in Public Resources Code Section 29725, shall submit to the Commission proposed amendments to their general plans. The amendments shall cause the general plans to be consistent with the criteria in Public Resources Code Section 29763.5 with respect to land located within the Primary Zone. Those criteria include a requirement that the general plan be consistent with the resource management plan. This overview and the following policies of the resource management plan constitute the regulatory portion of the plan.

The Primary Zone of the Sacramento-San Joaquin Delta (Delta) includes approximately 500,000 acres of waterways, levees and farmed lands extending over portions of five counties: Solano, Yolo, Sacramento, San Joaquin and Contra Costa. The rich peat soil in the central Delta and the mineral soils in the higher elevations support a strong agricultural economy. The Delta lands currently have access to the 1,000 miles of rivers and sloughs lacing the region. These waterways provide habitat for many aquatic species and the uplands provide year-round and seasonal habitat for amphibians, reptiles, mammals, and birds, including several rare and endangered species. The area is extremely popular for many types of recreation including fishing, boating, hunting,

Black = original Management Plan text

 $\underline{\text{Red}}$ = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The Plan consists of three sections. Part I, the Introduction, describes the planning program and the Plan objectives. Part II provides Findings and includes the Plan's individual Elements. Policies, and Recommendations for more than one local government, or for State agency or special district action. Part III describes the program for implementing the Plan. Part IV is aA map that which shows the boundary of the Primary and Secondary Zones of the Delta is attached to the end of this Plan. This Plan was prepared through a collaborative process with input provided from a broad range of public agencies and dedicated individuals. In addition, a wide variety of reference materials were used in the preparation of this Plan. The primary reference materials used to prepare the introductory sections of the individual elements included the following: Status and Trends of Delta-Suisun Services prepared by URS Corporation for the California Department of Water Resources, May 2007; CALFED Bay-Delta Program Programmatic Record of Decision August 28, 2000; Delta Protection Commission Land Use and Resource Management Plan for the Primary Zone of the Delta Update 2008 - Profiles of Ongoing Planning Processes and Planning Documents for Consideration prepared by the Delta Protection Commission staff, July 24, 2008; Our Vision for the California Delta prepared by the Governor's Delta Vision Blue Ribbon Task Force, January 29, 2008 (Second Printing); and the *Delta Vision Strategic Plan*

Each element includes an introductory discussion that provides the context for the element's goals and policies. The introductory discussions provide findings, policies, and recommendations. Findings are derived from the information in the background reports. The findings form the framework of data from which the goals and policies of the individual elements and recommendations are derived. Policies are the directions for action the local governments must embrace and support through amendments to the local

prepared by the Governor's Delta Vision Blue Ribbon Task Force, October

DWR:

As specified in Act, the Commission is not authorized to exercise any jurisdiction over matters within the jurisdiction of, or to carry out its powers and duties in conflict with the powers and duties of, any other State agency. The Plan, therefore, applies to development subject to approval by the Delta counties (Contra Costa, Sacramento, San Joaquin, Yolo and Solano). Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions are to be carried out in conformity with the Delta Protection Act of 1992. The Plan also provides guidance to State agencies with activities in the Primary Zone. Comment: This text is inserted to clarify the application of the Plan.

DWR:

In Part II eEach element includes

wildlife viewing, water-skiing, swimming, hiking, and biking.

The goals of the Plan as set out in the Act are to "protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities; assure orderly, balanced conservation and development of Delta land resources and improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety."

As specified in the Act, the Delta Protection Commission is not authorized to exercise any jurisdiction over matters within the jurisdiction of, or to carry out its powers and duties in conflict with, the powers and duties of any other State agency. The Plan also provides guidance to State agencies undertaking activities in the Primary Zone. The Plan, therefore, applies to development subject to approval by the Delta counties (Contra Costa, Sacramento, San Joaquin, Yolo and Solano). Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions are to be carried out in conformity with the Delta Protection Act of 1992.

The Plan consists of three sections. Part I, the Introduction, describes the planning program and the Plan objectives. Part II includes the Plan's individual Elements. Part III describes the program for implementing the Plan. A map that shows the boundary of the Primary and Secondary Zones of the Delta is attached.

This Plan was updated in 2009 following a collaborative planning process. The Delta Protection Commission established a Planning Advisory Committee (Committee) that began meeting in September 2008 which represented a broad spectrum of Delta interests. The Committee met and prepared a Draft Plan in December 2008. The Draft Plan was presented at public workshops throughout the Delta in order to receive input from the public and integrate the public's comments into the Draft Plan. The Draft Plan was presented to the Delta Protection Commission in March 2009. The Commission held subsequent meetings to consider the update to the Plan.

A wide variety of reference materials were used in the preparation of this Plan. The primary reference materials used to prepare the introductory sections of the individual elements included the following: Status and Trends of Delta-Suisun Services prepared by URS Corporation for the California Department of Water Resources, May 2007; CALFED Bay-Delta Program Programmatic Record of Decision August 28, 2000; Delta Protection Commission Land Use and Resource Management Plan for the Primary Zone of the Delta Update 2008 - Profiles of Ongoing Planning Processes and Planning Documents for

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

2008.

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

General Plans, if necessary. "The policies are intended to provide harmony Deltawide for local government actions. Recommendations are additional, optional directions for action for local government, for non-profit groups. State agencies, and others. It is important to note, however, that in the implementation of both the goals and policies and recommendations of this pPlan, the Act specifically prohibits the exercise of the power of eminent domain unless requested by the landowner.

SLC:

[Should add a statement as to why this document is being reviewed/revised at this time.]

[Should add a statement on climate change, such as inserted below.]

Many of the assets of the Delta are at risk from climate change. In 2006, the California Climate Change Center published a report that stated a historical rise in sea level of 7 inches and projected an additional rise of 22 – 35 inches by the end of the century. Since that time numerous other studies have published projected ranges of 7 – 23 inchesⁱ, 20 - 55 inchesⁱⁱ, and 32 – 79 inchesⁱⁱⁱ of sea level rise during this same period, with the differences in these projections attributed most often to how and whether glacier ice melt is included in the calculation. Damage from sea level rise will be exacerbated by other aspects of climate change, which include an increase in the frequency and intensity of extreme weather events and increased frequency of large wildfires. All aspects of the revised Land Use and Resource Management Plan will need to take into account projected climate change affects.

¹The International Panel on Climate Change, 4th Assessment on Climate Change, 2007

i Rahmstorf, Science, 2007

Comment: Climate change needs to be highlighted in the introduction.

Consideration prepared by the Delta Protection Commission staff, July 24, 2008; Our Vision for the California Delta prepared by the Governor's Delta Vision Blue Ribbon Task Force, January 29, 2008 (Second Printing); and the Delta Vision Strategic Plan prepared by the Governor's Delta Vision Blue Ribbon Task Force, October 2008.

Each element includes an introductory discussion that provides the context for the element's goals and policies. The introductory discussions provide the framework from which the goals and policies of the individual elements are derived. Policies are the directions for action the local governments must embrace and support through amendments to local General Plans, if necessary. It is important to note, however, that in the implementation of both the goals and policies of this Plan, the Act specifically prohibits the exercise of the power of eminent domain unless requested by the landowner.

The Commission will be required to take into consideration projected climate change effects in their implementation of this Land Use and Resource Management Plan. Many of the assets of the Delta are at risk from climate change. In 2006, the California Climate Change Center published a report that stated a historical rise in sea level of 7 inches and projected an additional rise of 22 to 35 inches by the end of the century. Since that time numerous other studies have published projected ranges of 7 to 23 inches¹, 20 to 55 inches, ² and 32 to 79 inches³ of sea level rise during this same period, with the differences in these projections attributed to how glacier ice melt is included in the calculation. Damage from sea level rise could be exacerbated by other aspects of climate change, which include an increase in the frequency and intensity of extreme weather events and increased frequency of large wildfires.

The term "shall" in these regulations is mandatory; the terms "may", "should", and "can" are advisory.

Every five (5) years the Commission will consider revising the Plan.

Overview

The Delta Protection Act of 1992 (Public Resources Code Section 29760 et. seq.) requires the Commission to prepare and adopt and thereafter review and maintain a comprehensive long-term resource management plan for land uses within the Primary Zone of the Delta ("resource management plan"). The resource management plan is to set forth a description of the needs and goals

[**StaffNote:** As a result of MPU document subcommittee discussion, this section has been merged into the Introduction section.]

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

for the Delta and a statement of the policies, standards, and elements of the resources management plan. Within 180 days of the adoption of the resource management plan or any amendments by the Commission, all local governments, as defined in Public Resources Code Section 29725, shall submit to the Commission proposed amendments. The amendments shall cause the general plans to be consistent with the criteria in Public Resources Code Section 29763.5 with respect to land located within the Primary Zone. That criteria includes a requirement that the general plan be consistent with the resource management plan. This overview, and the following policies of the will cause their general plans, as defined in Government Code Section 65300 et seq., to be consistent with respect to land located within the Primary Zone. The following regulations are the policies of the resource management plan. The regulations to not apply to other local agencies, as defined in Public Resources Code Section 29724, or to reclamation districts.

The term "shall" in these regulations is mandatory; the terms "may", "should", and "can" are advisory.

Note: In 2000, the policies of the Land Use and Resource Management Plan for the Primary Zone of the Delta were adopted as regulations [See Title 14, California Code of Regulations, Chapter 3. Regulations Governing Land Use and Resources Management in the Delta]. The regulations are printed as the policies of the Plan. Every five (5) years the Commission will consider revising the Plan.

DWR:

governments, as defined in Public Resources Code Section 29725, shall submit to the Commission proposed amendments to their general plans. The amendments shall cause the general plans to be consistent with the criteria in Public Resources Code

Natural Resources

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans, as they diked and drained the prehistoric marshes of the region.

NRDC:

Comment: The Plan's focus on ecosystem health should be strengthened. In particular, the Commission should incorporate into the Management Plan habitat restoration requirements that several expert fishery agencies have identified as critical to preserving and protecting delta dependent fisheries and their habitat.

SLC:

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans, as they diked and drained the prehistoric marshes of the region. The geology of the region created this unique —delta||. Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of the 1,100 square mile area known as —the Delta||. The Delta exists in a State known for earthquake faults; the probability of seismic activity remains constant. A zone of buried thrust faults is located along the western edge of the Delta.

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans as they diked and drained the prehistoric marshes of the region. The geology of the region created this unique "delta". Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of this 1,100 square-mile area. Based on the geological characteristics of the Delta, there is potential for seismic activity in the region.

The peat soils of the central and western Delta have oxidized, resulting in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Subsidence has slowed to about one-third of an inch a year in many areas.

Flood threats are compounded by the low elevations of the Delta and by subsidence. Twice in each approximately 25-hour period the elevation of the Sacramento River rises and falls about three feet due to the tidal cycle. The threat of flooding is generally associated with periods of high winter rainfall

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The peat soils of the central and western Delta have oxidized in great part due to drainage. Losses of soil due primarily to oxidation have resulted in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Current studies show the only effective way to stop subsidence is to reflood the peat soils. Subsidence has slowed to about one-third of an inch a year in many areas. About 60% of the lands in the Delta are designated prime agricultural lands.

The low elevations of the Delta, exacerbated by subsidence, result in a constant threat of flooding. Twice in each approximately 25 hour period the tides raise and lower the elevation of the Sacramento River about three feet. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides.

Comment: This was moved for better organization

The lush wetland habitats surrounded by riparian woodlands have been replaced by agricultural lands, both cultivated and irrigated croplands, and irrigated and unirrigated pasture lands. Remnants of natural habitat are located largely along some sloughs and rivers and on small channel islands. Pockets of wooded or wetland habitat exist on some islands.

The aquatic habitats were historically brackish and home to both resident and migratory fish. Modern aquatic habitats are affected by flows released from upstream dams, seasonal drainage from agricultural lands, and year-round drainage from sources outside the Primary Zone, such as sewage treatment plants. Several large, freshwater lakes are located on the eastern edge of the Delta, providing year-round wetland habitat.

Species indigenous to the Delta evolved within an ecosystem that was much different than today. Many of the indigenous species have declined because of loss of habitat, changes in hydrologic processes, or other changes to the system Some of these ecosystem changes over the past 150 years include:

- Loss of access to upstream habitat for anadromous fish from construction of dams
- Diking and draining of Delta lands to convert marshes to farms
- Urbanization

Topper van Loben Sels & Russell van Loben Sels (Delta Landowners/Residents):

The aquatic habitats were historically <u>ranged from fresh</u> to brackish and home to both resident and migratory fish.

DWR:

Species <u>native</u>indigenous to the Delta evolved within an ecosystem that was much different than today. Many of the indigenous species have declined because of loss of habitat, changes in <u>river flowshydrologic processes</u>, or other changes to the system. Some of these ecosystem changes over the past 150 years include:

and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides and strong winds.

The lush wetland habitats surrounded by riparian woodlands have been replaced by agricultural lands including cultivated and irrigated croplands as well as and irrigated and non-irrigated pasture lands. Remnants of natural habitat are located largely along some sloughs and rivers and on small channel islands. Pockets of wooded or wetland habitat exist on some islands.

The aquatic habitats historically ranged from fresh to brackish and were home to both resident and migratory fish. Modern aquatic habitats are affected by flows released from upstream dams, seasonal drainage from agricultural lands, and year-round drainage from sources outside the Primary Zone. Several large, freshwater lakes are located on the eastern edge of the Delta, providing year-round wetland habitat.

Species native to the Delta evolved within an ecosystem that was much different than today. Many of the indigenous species have declined because of ecosystem changes over the past 150 years including:

- Loss of habitat.
- Loss of access to upstream habitat for anadromous fish from construction of dams.
- Diking and draining of Delta lands to convert marshes to farms.
- Urbanization.
- Changes in river flows.
- Construction of levees that separate rivers from their floodplains thereby eliminating channel meander and riparian habitat.
- Invasion by non-native species.
- Alterations in hydrology, particularly the elimination of variability in seasonal flow patterns.
- Reduction in seasonal and annual variability in salinity.
- Introduction of numerous toxic substances.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

- Construction of levees that separate rivers from their floodplains and eliminate channel meandering and riparian habitat
- Invasion by non-native species
- Alterations in hydrology, particularly seasonal flow patterns
- Reduction in seasonal and annual variability in salinity
- Introduction of numerous toxic substances

Flow patterns in the Delta are governed by inflows, diversions, and tidal flows. The relative importance of these flows varies with season and location. In general, Delta inflows have decreased in winter-spring through impoundment behind dams and increased in summer through flow releases to support export pumping and control salinity in the Delta. That change in seasonal pattern has reduced the large floodflows that used to deliver sediment and rearrange the channel configuration (bathymetry) and has decreased salinity in the summer. A reduction in the frequency, duration and magnitude of high Delta outflows has altered the location of the low-salinity zone (i.e., the zone where freshwater transitions into brackish water), which is a crucial component of the indigenous species' habitat.

Net—tidally averaged—flows depend on inflows from the rivers and export flows in the southern Delta. Sometimes the combination of inflows and export causes "reverse flow," or a situation when flow moves upstream rather than downstream. These flows cause large numbers of young fish, including eggs and larvae, to be sent to the export facilities. In addition, some entrainment of these young fish, eggs, and larvae occurs even when the net flow is in the downstream direction.

The Delta provides substantial habitat for resident and migratory waterfowl and shorebirds. The abundance of these birds declined precipitously in the Delta

DFG:

Alterations in hydrology, particularly the elimination of variability in seasonal flow patterns

DFG

Comment: Clarification: "diversions" that govern Delta flow patterns refers to those that divert large quantities of water in relation to the channels they're drawing from, not all diversions. Depending upon size, most diversions in the Delta may affect flow patterns on a localized and likely insignificant scale.

DFG:

A reduction in the frequency, duration and magnitude of high Delta outflows has altered the location of the low-salinity zone (i.e., the zone where freshwater transitions into brackish water), which is a crucial component of the some indigenous native species' habitat.

DWR:

Net—tidally averaged—flows depend on inflows from the rivers and export flows in the southern Delta. Sometimes the combination of inflows and exports causes "reverse flow," or a situation when flow moves upstream rather than downstream. These flows can cause large numbers of young fish, including eggs and larvae, to be sent to the pumping facilities of the State Water Project and Central Valley Project export facilities. In addition, some entrainment of these young fish, eggs, and larvae occurs even when the net flow is in the downstream direction.

SLC

Comment: Too much detail—suggest deleting [entire paragraph]

SLC:

Comment: Needs to be moved—in the wrong place

• Export pumping in the South Delta.

Flow patterns in the Delta are governed by inflows, large water diversions, and tidal flows. The relative importance of these flows varies with season and location. Net—tidally averaged—flows depend on inflows from the rivers and export pumping in the southern Delta. Sometimes the combination of inflows and exports causes "reverse flow," or a situation when flow moves upstream rather than downstream. These flows can cause young fish, including eggs and larvae, to be entrained at the pumping facilities of the State Water Project and the Central Valley Project.

The Delta provides substantial habitat for resident and migratory waterfowl and shorebirds. The abundance of these birds declined precipitously in the Delta because of land reclamation, although subsequent changes in cropping patterns have allowed populations of some species to increase.

The Delta supports hundreds of fish, plants, mammals, amphibians, reptiles, and inverebrates. Many of the native species have declined in abundance and in range, leading to the listing of several species under the California and/or federal Endangered Species acts. Early species declines were caused by loss or isolation of physical habitat when the Delta islands were drained. However, due to the information collected as a result of monitoring activities that occurred in the 1960's through the 1980's, it is clear that species declined due to a variety of causes including changing climate; effects of toxic substances; alteration of habitat; introduction of non-native species that consume, compete with, or alter the habitat of native species; water diversions/exports; and changes in hydrology.

In the past few years, the abundance of several pelagic (open water) fish species inhabiting the Delta, such as delta smelt and longfin smelt, have declined to record-low levels. The reasons for this pelagic organism decline are multiple and are the subject of intense investigation. The loss of pelagic species in the Delta seems to be a function of poor conditions for food conditions, invasive species, degraded water quality, losses to export pumping, and other potential negative influences, such as toxins. The populations of salmon that migrate through the Delta and are dependent on Delta resources have also experienced precipitous declines, which has adversely affected the fishing industry.

Long-term trends for the ecosystem depend on the severity of climate change and the future physical structure and salinity of the Delta. Large mammals, such as bear and elk, which historically lived in and around the Delta have either been eliminated or reduced to extremely low numbers. Aquatic mammals including beaver and otter still remain. Some resident and migratory birds have adapted to the agricultural practices in the Delta, particularly the small grain

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

because of land reclamation, but changes in cropping patterns have allowed populations of some species to increase.

The Delta supports approximately 55 fish species, about half of which are natives. Many of the native species have declined in abundance and in range, leading to the listing of several species under the California and/or federal Endangered Species Acts. Early species declines were caused by loss or isolation of physical habitat when the Delta islands were drained. Species declines that have occurred since most monitoring began in the 1960s through 1980s have been attributed to a variety of causes including changing climate; effects of toxic substances; alteration of habitat; introduction of species that consume, compete with, or alter the habitat of natives; water diversions/exports; and changes in hydrology.

In the past few years, the abundance of several pelagic (open water) fish species inhabiting the Delta, such as delta smelt and longfin smelt, have declined to record-low levels. The reasons for pelagic organism decline are multiple and are the subject of intense investigation. Pelagic species of the Delta seem to be squeezed between poor conditions for food and water quality, losses to export pumping, and possibly other negative influences, such as toxins. Chinook salmon populations have also experience precipitous declines within the Delta.

Long-term trends for the ecosystem depend on the severity of climate change and the future physical structure and salinity of the Delta. Current trends for increasing temperature and a shift to an earlier runoff peak will favor some species over others. Chinook salmon, steelhead, and delta smelt are among those likely to suffer negative impacts of these changes. The planktonic specie at the base of the food web are unlikely to be strongly affected by these changes. However, some other species may be strongly affected by the trend toward clearer water in the Delta and by changes in the abundance and distribution of introduced clams and waterweed.

DFG:

Comment: Should make this first sentence more general, not limit it to "55 fish species" ... the Delta supports hundreds of fish, plants, mammals, amphibians, reptiles, invertebrates that are either flourishing (non-natives) or declining (natives) due to the reasons listed here.

DWR:

Pelagic species of the Delta seem to be squeezed between poor conditions for food and water quality, losses to export pumping, and possibly other negative influences, such as toxins. The populations of salmon which migrate through the Delta and are dependent upon conditions in the Delta Chinook salmon populations have also experienced precipitous declines within the Delta. **Comment:** This change is done to reflect the fact that salmon do not reside in

SLC:

Comment: Too much detail—suggest deleting

the Delta but migrate through it.

Long-term trends for the ecosystem depend on the severity of climate change and the future physical structure and salinity of the Delta. Current trends for increasing temperature and a shift to an earlier runoff peak will favor some species over others. Chinook salmon, steelhead, and delta smelt are among those likely to suffer negative impacts of these changes. The planktonic species at the base of the food web are unlikely to be strongly affected by these changes. However, some other species may be strongly affected by the trend toward clearer water in the Delta and by changes in the abundance and distribution of introduced clams and waterweed. **Comment:** Too much detail—suggest deleting

fields which are flooded in fall and winter months. Migratory birds include ducks, geese, swans, cranes, and shorebirds. Hawks and eagles forage in the Delta fields. The Primary Zone, with its large open expanses of farmland, mosaic of small grain crop residues and shallow flooded fields, permit wildlife to feed and rest, thereby providing high quality wildlife habitat.

It is recognized that Habitat Conservation Plans and Natural Community Conservation Planning (HCP/NCCP) efforts within the Delta, including the CALFED Ecosystem Restoration Program Plan (ERPP)⁴, must be acknowledged in the administration of the policies of the Plan as these programs include agreements and/or contracts that have long-term provisions to sustain a durable program.

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Blue = Recommended language of the MPU Document Review Subcommittee

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

⁴ The CALFED ERPP was adopted as CALFED's Natural Communities Conservation Plan as part of the Record of Decision certification in 2000 and its implementation is ongoing.

Black = original Management Plan text

Management Plan Update – Overview & Chapter Introduction Components

<u>DFG</u>

The planktonic species at the base of the food web are unlikely to be strongly affected by these changes.

Comment: This is currently unknown.

However, some other species may be strongly affected by the trend toward clearer water in the Delta and by changes in the abundance and distribution of introduced clams and waterweed exotic submerged and floating aquatic vegetation.

At all levels of the ecosystem, native plants and animals are now competing with exotics. Of particular concern are the Asian clam, which is competing for phytoplankton at the bottom of the food chain, and popular introduced game fish, such as the Striped bass, which are declining in numbers and in health. The native winter run Chinook salmon and Delta smelt are designated endangered and threatened, respectively.

Large mammals, such as bear and elk, which historically lived in and around the Delta have been eliminated. Aquatic mammals including beaver and otter still remain. Both year-round and migratory birds have adapted to the agricultural practices in the Delta, particularly the small grain fields which are flooded in fall and winter months. Migratory birds include ducks, geese, swans, cranes, and shorebirds. Hawks and eagles forage in the Delta fields. The Primary Zone, with its large open expanses of farmland, mosaic of small grain crop residues and shallow flooded fields, permitting wildlife to feed and rest, provides extremely high quality wildlife habitat. Hawks and eagles forage in the Delta fields; Swainson's Hawk is designated "threatened" by the Department of Fish and Game.

The geology of the region created this unique "delta". Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of the 1,100 square mile area known as "the Delta". The Delta exists in a State known for earthquake faults; the probability of seismic activity remains constant. A zone of buried thrust faults is located along the western edge of the Delta.

DWR:

Large mammals, such as bear and elk, which historically lived in and around the Delta have <u>either</u> been eliminated <u>or reduced to extremely low numbers</u>. **Comment:** There are still Elk in the Suisun Bay area. There is at least one herd of the Tule Elk there.

DFG:

provides extremely high quality wildlife habitat.

San Joaquin Farm Bureau:

...the probability of seismic activity remains constant.

Comment: The sentence is vague and leaves room for misconceptions. It would be helpful to state any historical records of earthquakes...It will help to qualify if the zone of buried thrust faults is of any major concern.

SLC:

The geology of the region created this unique —delta||. Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of the 1,100 square mile area known as —the Delta||. The Delta exists in a State known for earthquake faults; the probability of seismic activity remains constant. A zone of buried thrust faults is located along the western edge of the Delta.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The peat soils of the central and western Delta have oxidized in great part due to drainage. Losses of soil due primarily to such oxidation have resulted in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Current studies show the only effective way to stop subsidence is to reflood the peat soils. Subsidence has slowed to about one-third of an inch a year in many areas. About 60% of the lands in the Delta are designated prime agricultural lands.

The low elevations of the Delta, exacerbated by subsidence, result in a constant threat of flooding. Twice in each approximately 25 hour period the tides raise and lower the elevation of the Sacramento River about three feet. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides.

It is recognized that Habitat Conservation Plans and Natural Community Conservation Planning (HCP/NCCP) efforts within the Delta must be acknowledged in the administration of the policies of the Management Plan as these programs include agreements and/or contracts that have long-term

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

The peat soils of the central and western Delta have oxidized in great part due to drainage. Losses of soil due primarily to such oxidation have resulted in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Current studies show the only effective way to stop subsidence is to reflood the peat soils. Subsidence has slowed to about one third of an inch a year in many areas. About 60% of the lands in the Delta are designated prime agricultural lands.

The low elevations of the Delta, exacerbated by subsidence, result in a constant threat of flooding. Twice in each approximately 25 hour period the tides raise and lower the elevation of the Sacramento River about three feet. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides.

Comment: I moved this discussion up (i.e., not deleted)

DFG:

Subsidence has slowed...

Comment: Note that USGS has had some success at reversing (not just stopping) subsidence at some experimental ponds on Twitchell Island, through the planting of native vegetation (tules) in conjunction with flooding to ~ 1 ' depth of water. Contact is Roger Fujii.

Topper van Loben Sels & Russell van Loben Sels

(Delta Landowners/Residents):

The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides and strong winds. [Topper van Loben Sels also submitted this comment individually]

DFG:

[Comments based on paragraph..."The low elevations..."]

Comment: This paragraph should acknowledge how the threat due to flooding (due to seasonal high flow or to the increasing threat of a large seismic event in the Delta) is increasing over time.

It is recognized that Habitat Conservation Plans and Natural Community Conservation Planning (HCP/NCCP) efforts within the Delta, including the <u>CALFED Ecosystem Restoration Program Plan (ERPP)</u>, must be acknowledged in the administration of the policies of the Management Plan as these programs include agreements and/or contracts that have long-term

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

provisions to sustain a durable program.

provisions to sustain a durable program.

Comment: Note that the CALFED ERP was adopted as CALFED'S NCCP as part of ROD certification in 2000, and its implementation is ongoing.

Utilities & Infrastructure

Due to the Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Utilities located in the Delta include: radio and television transmission towers; electrical transmission lines including Pacific Gas and Electric, Sacramento Municipal Utility District, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and transporting water through the Delta to the Bay Area and to state and federal water projects.

The regional electrical transmission lines carry power within California as well as between regions of the western United States. More than 500 miles of transmission lines and more than 60 substations lie within the Delta boundaries. Several electrical peaking plants surrounding the Delta depend on these transmission lines. Within the larger Delta-Suisun Marsh area are approximately 240 operation gas wells. Natural gas pipelines serve local gas fields and regional pipelines. PG&E's underground natural gas storage area under McDonald Island provides up to one-third of the peak natural gas supply for its service area. Pipelines carry gasoline and aviation fuel across the Delta from Bay Area refineries to depots in Sacramento and Stockton for distribution to Northern California and Nevada. They provide approximately 50 percent of the transportation fuel used in that region. The Mokelumne Aqueduct, consisting of three pipelines, is the main municipal water conveyance facility for 1.3 million people in the East Bay Municipal Utility District. The aqueduct

SLC:

Due to the <u>Sacramento-San Joaquin</u> Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Comment: Consistency needed

SLC:

Utilities located in the <u>Sacramento-San Joaquin</u> Delta include: radio and television transmission towers; electrical transmission lines including Pacific Gas and Electric Sacramento Municipal Utility District, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and transporting water through the Delta to the Bay Area and to state and federal water projects.

Comment: Consistency needed **Comment:** Redundant/unnecessary

DFG:

Utilities in the Delta include: radio, <u>cellular phone</u>, and television transmission towers... to the Bay Area and to <u>S</u>tate and federal water projects.

DWR:

Within the larger Delta-Suisun Marsh area are approximately 240 operational gas wells. Natural gas pipelines serve local gas fields and regional pipelines. Pacific Gas and Electric G&E's underground natural gas storage area under McDonald Island provides up to one-third of the peak natural gas supply for its service area.

SLC:

Delete this entire paragraph.

Comment: Too much detail—suggest deleting

Due to the Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Utilities located in the Delta include: radio, cellular telephone and television transmission towers; electrical transmission lines including Pacific Gas and Electric, Sacramento Municipal Utility District, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and to the State and federal water projects.

The regional electrical transmission lines carry power within California as well as between regions of the western United States. More than 500 miles of transmission lines and more than 60 substations lie within the Delta boundaries. Several electrical peaking plants surrounding the Delta depend on these transmission lines. Within the larger Delta-Suisun Marsh area are approximately 240 operation gas wells. Natural gas pipelines serve local gas fields and regional pipelines. PG&E's underground natural gas storage area under McDonald Island provides up to one-third of the peak natural gas supply for its service area. Pipelines carry gasoline and aviation fuel across the Delta from Bay Area refineries to depots in Sacramento and Stockton for distribution to Northern California and Nevada. They provide approximately 50 percent of the transportation fuel used in that region. The Mokelumne Aqueduct, consisting of three pipelines, is the main municipal water conveyance facility for 1.3 million people in the East Bay Municipal Utility District. The aqueduct crosses five Delta islands/tracts (Orwood Tract, Woodward Island, Jones Tract, Roberts Island, and Sargent-Barnhart Tract) protected by levees.

Local governments regulate the utilities that serve Delta residents and visitors including potable water, sewage disposal, and solid waste disposal. Most potable water is obtained from groundwater through local wells. Most wastewater from homes and businesses is treated in on-site septic tanks. Some of the larger communities and developments have self-contained wastewater treatment facilities. Communities outside the Primary Zone currently, and are anticipated to continue to release treated wastewater into Delta waterways (though wastewater discharge requirements issued by the regional water board),

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

crosses five Delta islands/tracts (Orwood Tract, Woodward Island, Jones Tract, Roberts Island, and Sargent-Barnhart Tract) protected by levees.

Buried pipelines within rights of way appear to generally have lesser impacts on wildlife movements or land uses than aboveground facilities. The aboveground facilities, such as pipelines, canals, and transmission lines do impact wildlife movements, reduce availability of valuable habitat, and result in direct loss of birds killed by striking transmission lines.

Local governments regulate the utilities that serve Delta residents and visitors including potable water, sewage disposal, and solid waste disposal. Most potable water is obtained from groundwater through local wells. Most wastewater from homes and businesses is treated in on-site septic tanks. Some of the larger communities and developments have self-contained wastewater treatment facilities. Communities outside the Primary Zone do and propose to continue to release treated wastewater into Delta waterways, onto constructed wetlands, or onto agricultural lands. Most solid waste generated in the Delta is disposed of at facilities outside the area. Recycling is not readily available for Delta residents; in the Delta, agricultural waste is typically disposed of on site.

Natural gas remains an important natural resource extracted from the Delta. PG&E maintains a large underground storage site under McDonald Island.

Transportation systems traversing around and through the Delta include several railroads and freeways, state highways, and county roads. Three interstate freeways (I-5, I-80, and I-580) are major transportation and trucking routes that pass the periphery of the Delta. The three major state highways in the Delta (SR 4, SR 12, and SR 160) are typically two lanes, sometimes built on top of levees. Originally meant for lower traffic volumes at moderate speeds, the state highways are now heavily used for regional trucking, recreational access, and commuting. County roads generally follow the levees. Five auto ferries in the Delta allow public access, but three of them lead to islands that are private property. There are more than 50 bridges, including approximately 30 drawbridges, spanning the navigable channels in the Delta. Bridges impact vessel traffic on the waterways; some bridges rarely open requiring boats to travel alternate waterways. Some bridges open regularly, impacting surface traffic and creating possible delays in emergency response.

SLC:

Buried pipelines within rights of way appear to generally have lesser impacts on wildlife movements or land uses than aboveground facilities. The aboveground facilities, such as pipelines, canals, and transmission lines do impact wildlife movements, reduce availability of valuable habitat, and result in direct loss of birds killed by striking transmission lines.

SLC:

Most solid waste generated in the Delta is disposed of at facilities outside the area. Recycling is not readily available for Delta residents; in the Delta, agricultural waste is typically disposed of on site.

Comment: Too much detail—suggest deleting

DWR:

There are more than 50 bridges, including approximately 30 drawbridges, spanning the navigable channels in the Delta. Bridges impact vessel traffic on the waterways; some <u>draw</u>bridges rarely open requiring boats to travel alternate waterways. Some <u>draw</u>bridges open regularly, impacting surface traffic and creating possible delays in emergency response.

SLC:

County roads generally follow the levees. Five auto ferries in the Delta allow public access, but three of them lead to islands that are private property. There are more than 50 bridges, including approximately 30 drawbridges, spanning the navigable channels in the Delta; impacts to public trust issues such as navigation and access result. Bridges impact vessel traffic on the waterways;

onto constructed wetlands, or onto agricultural lands. Most solid waste generated in the Delta is disposed of at facilities outside the area.

Transportation systems traversing around and through the Delta include several railroads and freeways, state highways, and county roads. Three interstate freeways (Interstate 5, Interstate 80, and Interstate 580) provide major transportation and trucking routes that pass the periphery of the Delta. The three major state highways in the Delta (State Routes 4, 12, and 160) are typically two lanes, sometimes built on top of levees. Originally meant for lower traffic volumes at moderate speeds, the state highways are now heavily used for regional trucking, recreational access, and commuting. More than 50 bridges, including approximately 30 drawbridges, span the navigable channels of the Delta.

Regional rail traffic between the Bay Area and the Central Valley passes through the Delta. The Amtrak San Joaquin route from Bakersfield to Sacramento/Oakland, which crosses through the Delta, had nearly 800,000 riders in 2006. In addition, companies such as the Sierra Northern Railway use existing short-line tracks for inter-regional freight and passenger services.

Two major ports lie north and east of the Primary Zone, the Ports of Sacramento and Stockton, respectively. The Stockton and Sacramento Deep Water Ship channels traversing the Delta were constructed in 1933 and 1963, respectively. The Stockton channel is 35 feet deep and can handle 55,000-ton class vessels with full loads. More than 300 ships and barges used the channel in 2005. The Sacramento ship channel is 30 feet deep with plans underway to increase its depth to 35 feet. Both ports are likely to expand in the future, which would result in an increase in ship and barge traffic through the Delta. Several million tons of diversified products are shipped through the Delta each year.

Airports in the Primary Zone of the Delta primarily serve individual landowners, agriculture-serving businesses and small air operations.

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

some bridges rarely open requiring boats to travel alternate waterways. Some bridges open regularly, impacting surface traffic and creating possible delays in emergency response

Comment: Too much detail—suggest deleting **Comment:** Note impact to public trust issues

Comment: Too much negative detail—suggest deleting in favor of public trust statement above.

Many bridges connect island developments; five island are servedonly by ferry. Regional rail traffic between the Bay Area and the Central Valley passes through the Delta. The Amtrak San Joaquin route from Bakersfield to Sacramento/Oakland, which crosses through the Delta, had nearly 800,000 riders in 2006. In addition, companies such as the Sierra Northern Railway use existing short-line tracks for inter-regional freight and passenger services.

Two major ports lie north and east of the Primary Zone, the Ports of Sacramento and Stockton, respectively. The Stockton and Sacramento Deep Water Ship Channels were constructed in 1933 and 1963, respectively. The Stockton channel is 35 feet deep and can handle 55,000-ton class vessels with full loads. More than 300 ships and barges used the channel in 2005. The Sacramento ship channel is 30 feet deep. Both ports are likely to expand in the future, which would result in an increase in ship and barge traffic through the Delta. The shipping channels were constructed the late 1920's (Stockton) and 1950's (Sacramento). Several million tons of diversified products are shipped through the Delta each year.

Airports in the <u>Primary Zone of the</u> Delta are limited to small facilities serving individual land-owners and agriculture-serving businesses.

DFG:

The Sacramento ship channel is 30 feet deep, with plans underway to increase its depth to 35 feet. Both ports are likely to expand in the future, which would result in an increase in ship and barge traffic through the Delta.

Land Use

The patterns of settlement in the Delta reflect the history of immigration into the State in the late 19th century. The Delta settlement pattern was historically, and remains to this day, closely associated with the rivers, sloughs, and waterways, and the agricultural land use. One incorporated city, Isleton and portions of Stockton, Rio Vista, Antioch, Oakley, Sacramento, West Sacramento, Elk Grove, Tracy, Lathrop and Pittsburg, are located within or just outside of exist in the Secondary Zone. Unincorporated communities towns lielying along the Sacramento River in the Primary Zone including: Clarksburg, Courtland, Hood, Locke, Walnut Grove, and Ryde. The towns served as social and service centers for the surrounding farms and historically served as shipping sites for products. These rural communities reflect the diverse heritage of the Delta and the independence of country living.

The patterns of settlement in the Delta reflect the history of immigration into the State in the late 19th century. The settlement pattern was historically, and remains to this day, closely associated with the rivers, sloughs, and waterways of the Delta, and with the configuration of agricultural lands. One incorporated city, Isleton, and portions of other incorporated cities including Stockton, Antioch, Oakley, Sacramento, West Sacramento, Elk Grove, Tracy, Lathrop and Pittsburg, are located within or just outside of the Secondary Zone; and Rio Vista is located partially within the primary zone, but not within the secondary zone. Unincorporated towns lying along the Sacramento River in the Primary Zone include Clarksburg, Courtland, Hood, Locke, Walnut Grove, and Ryde. These towns serve as social and service centers for the surrounding farms and historically served as shipping sites for products. These rural communities reflect the diverse heritage of the Delta.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The five Delta counties (Solano, Yolo, Sacramento, San Joaquin, and Contra Costa) designate Primary Zone lands for agriculture or special Delta resources in their respective General Plans. The zoning codes allow a variety of uses in the Primary Zone: agriculture and agriculturally-oriented uses; outdoor recreation; wildlife habitat; public facilities; and limited areas for commercial, industrial, and rural residential development. The parcel sizes specified in the General Plans and zoning codes range from 160 to 5, with most of the Primary Zone in the 80 to 20 acre minimum parcel sizes.

The two Delta ports, Sacramento and Stockton, own hundreds of acres of land along their respective shipping channels. Some of these lands are used for dredge materials disposal; some have been or will be used for mitigation sites to create new wetland habitat to offset losses suffered in construction or operation of the shipping channels.

Sherman Island, Twitchell Island, Staten Island, and the McCormack-Williamson Tract are held as conservation lands, currently operated as farmlands. Since 1990, urban and other land uses in the Secondary Zone have gained substantial acreage while agricultural land use has declined. Other land uses include conservation areas, low-density rural developments, natural areas not suitable for livestock grazing, and other non-agricultural areas.

The periphery of the Delta is undergoing rapid urbanization associated with substantial population growth. Current and future population growth increases the demand for developable land, particularly in areas near the Bay Area, Stockton, and Sacramento. This demand results in the conversion of open space, primarily agricultural land, to residential and commercial uses.

Acquisition of farmed land, and subsequent retirement of that land, affects the economic base for farm support industries; the economic base for community businesses that rely on patronage from citizens working in farm or farm support industries; the tax and assessment base for special districts, county, and State; and existing wildlife use patterns which have adapted to agricultural land use patterns.

In the Primary Zone, County General Plans and zoning ordinances all designate the Primary Zone primarily for agriculture. Within the agricultural zones, recreation, wildlife habitat, and nature preserves can be approved. The minimum parcel sizes vary within the five counties ranging from five acre

DFG:

The parcel sizes specified in the General Plans and zoning codes range from 160 to 5 to 160 acres, with most of the Primary Zone in 80 to 20 to 80 acre minimum parcel sizes.

DFG:

Sherman Island, Twitchell Island, Staten Island, portions of the Yolo Bypass (e.g. Vic Fazio Wildlife Area) and the McCormack-Williamson Tract are held as conservation lands, currently operated as farmlands. There are also a number of conservation easements and mitigation banks that are being created under local HCPs and NCCPs (e.g. San Joaquin Multi-Species Conservation Plan). Since 1990, urban and other land uses in the Secondary Zone have gained substantial acreage while agricultural land use has declined. Other land uses include conservation areas, low-density rural developments, natural areas not suitable for livestock grazing, and other non-agricultural areas.

DFG:

In addition to numerous international, national, and State- and locally-influenced factors affecting the profitability of farming in the Delta, aAcquisition of farmed land, and subsequent retirement of that land, affects the economic base for farm support industries; the economic base for community businesses that rely on patronage from citizens working in farm or farm support industries; the tax and assessment base for special districts, county, and State; and existing wildlife use patterns which have adapted to agricultural land use patterns.

The five Delta counties (Solano, Yolo, Sacramento, San Joaquin, and Contra Costa) designate Primary Zone lands for agriculture or special Delta resources in their respective general plans. The zoning codes for the five Delta counties allow a variety of uses in the Primary Zone including agriculture and agriculturally-oriented uses; outdoor recreation; wildlife habitat; public facilities; and limited areas for commercial, industrial, and rural residential development.

The two Delta ports, Sacramento and Stockton, own hundreds of acres of land along their respective shipping channels. Some of these lands are used for dredge material disposal and some have been or will be used for habitat mitigation sites.

Sherman Island, Twitchell Island, Staten Island, portions of the Yolo Bypass (e.g., Vic Fazio Wildlife Area) and McCormack-Williamson Tract are held as conservation lands and are currently operated as farmlands. A number of conservation easements and mitigation banks will also be created under local Habitat Conservation Plans and Natural Communities Conservation Plans. Since 1990, urban and other land uses in the Secondary Zone have gained substantial acreage while agricultural land use has declined. Other land uses within the Secondary Zone include conservation areas, low-density rural developments, natural areas not suitable for livestock grazing, and other non-agricultural areas.

The periphery of the Delta is undergoing rapid urbanization associated with substantial population growth. Current and future population growth increases the demand for developable land, particularly in areas near the Bay area, Stockton, and Sacramento. This demand results in the conversion of open space, primarily agricultural land, to residential and commercial uses. Increasing concern exists regarding the potential for urbanization and projects in the secondary zone to impact the primary zone.

In addition to numerous local, national and international factors affecting the profitability of farming in the Delta, the acquisition of farmed land and subsequent retirement of that land affects the economic base for farm support industries; the economic base for community businesses that rely on patronage from citizens working in farm or farm support industries; the tax and assessment base for special districts, counties, and the State; and the existing wildlife use patterns that have adapted to agricultural land use patterns.

Black = original Management Plan text

 $\underline{\text{Red}}$ = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

minimum parcels (Contra Costa and Yolo Counties) to 160 acre minimum parcels (Solano County: non-irrigated and Yolo County: non-irrigated and under Williamson Act contract). Some Counties link minimum parcel size to soil type (Sacramento County) and some to "farmable unit" (Solano County). These variations show the difficulty in developing a universal definition or minimum parcel size to protect lands designated Agriculture in the General Plans.

This Plan seeks to retain the existing land use patterns in the Primary Zone extensive agriculture lands serviced by the existing communities. While agricultural support facilities can be constructed in the agricultural areas, other future growth and development should be directed to the sites in the existing communities which were so designated as of January 1, 1992.

Significant acreage in the Primary Zone have been purchased in the last few years by state, federal, and non-profit agencies for enhancement and management as wildlife habitat. In addition, the Ports of Sacramento and Stockton own several thousand acres along their shipping channels. The State Department of Parks and Recreation owns several hundred acres of land and several thousand more of water for recreational purposes. The Department of Water Resources (DWR) has announced its intention to acquire both Sherman and Twitchell Islands, totaling 13,500 acres to protect the integrity of the levee system, develop wildlife habitat, and to control soil oxidation and subsidence. In addition, DWR owns Clifton Court Forebay and other lands associated with the State Water Project. Federal entities own land on the tip of Grand Island and near the Delta Cross Channel.

Changes in land use from agriculture are proposed on several islands covering several thousand acres. Both Twitchell and Sherman Island may be converted to year round wildlife habitat. Stone Lakes Wildlife Refuge will acquire some lands for conversion to wildlife habitat. Medford Island is now a mitigation bank, managed for both agriculture and wildlife habitat. Prospect Island may be converted to wildlife habitat. The proposed Delta Wetlands project would convert four islands totaling 20,000 acres into two reservoirs and two wildlife habitat areas. A 3,000 acre area within the Yolo Bypass will be converted from agriculture to year round wetland. Other projects propose Primary Zone lands be acquired for upland disposal of treated wastewater and biosolids, and for mitigation of environmental impacts.

NRDC:

Comment: The proposed revision weakening protections of agricultural land uses should be eliminated. We urge the Commission to reject this change as contrary to the purposes of the Act and counterproductive to cohesive management of the Delta.

Agriculture

Delta agricultural lands were "reclaimed" through construction of levees and drainage of the marshy islands of the area. In less than 100 years, from 1850 to 1930, hundreds of thousands of acres of land went into agricultural production.

SLC:

Comment: Add something here about these reclaimed lands possessing peal soils that are highly productive for ag, with some estimate of economic

Delta agricultural lands were "reclaimed" through construction of levees and drainage of the marshy islands of the area. In less than 100 years, from 1850 to 1930, hundreds of thousands of acres of land went into agricultural production

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The farmers and landowners represented a cross section of the new Americans-- contribution to the state and/or region. Slavs, Dutch, German, English, and others. Many groups of immigrants first labored in the fields, then went on to become landowners or tenant farmers including Portuguese, Chinese, Japanese, Filipinos, and Hindus.

Early crops were grains, and fruits and vegetables marketed in the nearby cities. Early specialty crops included wheat, barley, beans, and potatoes. Later asparagus, sugar beets, tomatoes, and celery grew in popularity. Currently, the Delta counties raise a variety of crops including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, and vegetables.

In the recent past, thousands of acres of agricultural lands were developed for residential and other urban uses. Between 1976 1990 and 1993 2004, about 21,60040,000 acres of agricultural land was converted to urban and conservation uses in the Delta in the Secondary Zone of the Delta were developed. Of the 21,600 acres, about 5,800 acres were orchards. The biggest change in the Primary Zone in that period in was the planting of about 4,500 acres of new orchards and vineyards. However, the lLoss of steady water supplies for Valley farmers will tend to make Delta lands with their riparian water rights more valuable for agriculture. New markets to sell crops and new crops, including the conversion of crops to fuel burn as energy sources, will continue to keep agriculture an important land use in the Delta and California.

Agricultural lands within the Delta are highly productive and well suited for ongoing agricultural operations, as evidenced by the well-established wine growing regions, the islands that are mapped out of the 100-year flood zone, the deep well drained soils, the areas where permanent trees and vines are planted, the presence of state of the art reclamation districts that maintain the levees, the maintenance of water quality at the highest levels, the outstanding tomato yields, and the recognized superior quality of alfalfa grown in the Delta.

Local governments have certain limited regulatory authority over agricultural lands, including minimum parcel sizes. While each of the five Delta counties has different minimum parcel sizes, each County clearly delineates the Delta lands for long-term agricultural use. Local governments use "land use tools" such as an agricultural element in the General Plan, adoption of an urban limit line, buffers between agriculture and other approved uses, adoption of a Right to Farm ordinance, controls over subdivisions of agricultural lands, limitations on land uses allowable in the agricultural zone, limitations on changing General Plan designations, acquisition of conservation easements, transfer of development rights, and full support of the Williamson Act programs to protect commercial agriculture and compatible land uses.

Topper van Loben Sels & Russell van Loben Sels (Delta Landowners/Residents):

Currently, the Delta counties raise a variety of crops including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, and vegetables, and wine grapes. [Topper van Loben Sels also submitted this comment individually]

SLC:

Comment: cite data source

DWR:

However, the loss of reliablesteady water supplies for Valley farmers will tend to make Delta lands with their riparian water rights more valuable for agriculture.

SLC:

Delete this entire paragraph.

Comment: Add a general statement above and delete this one.

due in large part to the high productivity of the peat soils in the central Delta and the mineral soils in the higher elevations. The farmers and landowners represented a cross section of the new Americans-- Slavs, Dutch, German, English, and others. Many groups of immigrants first labored in the fields, then went on to become landowners or tenant farmers including Portuguese, Chinese, Japanese, Filipinos, and Hindus.

Early crops were grains, fruits, and vegetables marketed in the nearby cities. Early specialty crops included wheat, barley, beans, and potatoes. Later asparagus, sugar beets, tomatoes, and celery grew in popularity. Currently, the Delta counties raise a variety of crops including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, wine grapes, vegetables, olives and blueberries.

In the recent past, thousands of acres of agricultural lands were developed for residential and other urban uses. Between 1990 and 2004, approximately 39,000 acres of agricultural land was converted to urban and other uses in the larger Delta-Suisun Marsh area (Status and Trends of Delta-Suisun Service, California Department of Water Resources, May 2007). New markets to sell crops, including new crop uses such as the conversion to fuel sources, will continue to keep agriculture an important land use in the Delta and California.

Agricultural lands within the Delta are highly productive and well suited for ongoing agricultural operations. Delta counties have recognized the value of the agriculture economy and have clearly delineated Delta lands for long-term agricultural use. Local governments use specific land use tools to protect the agricultural way of life within the Delta. These tools are the inclusion of agricultural elements in their general plans, the adoption of urban limit lines. the establishment of buffers between agriculture and other approved uses, the adoption of Right-to-Farm ordinances, full support of the Williamson Act programs, the control of land subdivision and land use types allowed within agricultural areas, the establishment of minimum agricultural parcel sizes, and the establishment of limits on General Plan land use designation changes. Also pursuant to the Act, to the extent that any of the requirements specified in this Land Use and Resource Management Plan are in conflict, nothing in this Plan shall deny the right of the landowner to continue the agricultural use of the

Some agricultural lands provide rich seasonal wildlife habitat. Thousands of acres of agricultural lands are flooded after harvest and provide feeding and resting areas for resident and migratory birds and other wildlife. This practice of seasonal flooding helps maximize the wildlife values of agricultural areas and lessen opportunities for agricultural pests.

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

Conflicts between agricultural activities and new residential, commercial, industrial, and recreational uses create long-term conflicts, which have a deleterious impact on agriculture. Complaints by non-farmers include: noise, dust, odors, flies, mosquitoes, aerial applications of fertilizer, pesticide and herbicide, night activity, and other aspects of normal agricultural activity. Complaints by farmers include trash, vandalism, increased traffic, loss of agricultural land, and dust.

Agricultural lands provide rich seasonal wildlife habitat. Thousands of acres of agricultural lands are flooded after harvest and provide feeding and resting areas for local and migratory birds and other wildlife. Development of a management plan for seasonal flooding helps maximize the wildlife values and lessen opportunities for agricultural pests.

Agriculture in the Delta evolves as farming practices, market opportunities, and government programs change. The availability of water makes the Delta a unique geographical region for agriculture. Future agricultural practices may require construction of additional infrastructure to accommodate more intensive agricultural operations.

SLC:

Delete this entire paragraph.

Comment: needs to put into the form of a goal statement; not appropriate here and inconsistent with the support of recreation.

DFG

Some aAgricultural lands provide rich seasonal wildlife habitat.

SLC:

Agriculture in the Delta evolves as farming practices, market opportunities, and government programs change. The availability of water makes the Delta a unique geographical region for agriculture. Future agricultural practices may require construction of additional infrastructure to accommodate more intensive agricultural operations.

Comment: If we are revising every 5 years, this uncertain of a statement seems unnecessary.

Water

In California, rainfall runoff and snowmelt are captured in reservoirs to redistribute to urban and agricultural customers and for environmental uses. About 75% of the State's water originates north of Sacramentothe Delta; and about 75% of the State's water needs occur south of the DeltaSacramento.

Water bound for distribution through both the State Water Project (SWP) and the federal Central Valley Project (CVP) is taken from the south Delta. In addition, water to serve some Bay Area urban users is taken from the Delta. The SWP State project has contracts to divert export up to 4.2 million acre feet per year from the Delta, which supplies primarily urban uses but also supplies agricultural use south of the Delta. The and the CVP has contracts to divert

SLC:

About 75% of the State's water originates north of Sacramentothe Delta; and about 75% of the State's water needs occur south of the DeltaSacramento Comment: citation needed

DWR:

In California, rainfall runoff and snowmelt are captured in reservoirs to redistribute to urban and agricultural customers while meeting environmental requirements and for environmental uses. About 75% of the State's water originates north of the Delta; and about 75% of the State's water needs occur south of the Delta.

SLC:

Water bound for distribution through both the State Water Project (SWP) and the federal Central Valley Project (CVP) is taken from the south Delta. The CVP has contracts to divert 3.3 million acre feet per year, which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. In addition, water to serve some Bay Area urban users is taken from the Delta. The SWP State project has contracts to divert export up to 4.2

In California, rainfall runoff and snowmelt are captured in reservoirs to redistribute to urban and agricultural customers while meeting environmental requirements. About 75 percent of the State's water originates north of the Delta; and about 75 percent of the State's water needs occur south of the Delta.

Water bound for distribution through both the State Water Project (SWP) and the federal Central Valley Project (CVP) is taken from the south Delta. The CVP has contracts to divert 3.3 million acre feet per year, which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. In addition, water to serve some Bay area urban users is taken from the Delta. The SWP has contracts to divert 4.2 million acre feet per year from the Delta, which supplies primarily urban uses but also supplies agricultural uses south of the Delta. On average, the projects export a total of about 5 million acre feet annually.

About two-thirds of the State's population gets at least a portion of its drinking water from the Delta. In addition, Delta farmers and irrigation districts have rights to irrigate with water taken directly from Delta sloughs and channels.

Because the Delta drains the Sacramento River and San Joaquin River watersheds, urban stormwater runoff and waste discharges from upstream and

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

federal project another 3.3 million acre feet per year. , which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. On average, the projects together export about 5 million acre feet annually.

The federal C.W. "Bill" Jones Pumping Plant (formerly the Tracy Pumping Plant) can export about 4,600 cubic feet per second (cfs). The SWP Banks Pumping Plant has a physical export capacity of 10,300 cfs, but is permitted to divert 6,680 cfs (with higher limits during certain months) from the Delta into the pumping plant's Clifton Court Forebay. The fish protection facilities at these state and federal pumping plants are not state-of-the-art.

Of the water in the two developed water systes, about 83% is used for agriculture and about 17% is for "urban" uses. About two-thirds of the State's population gets at least a portion of its drinking water from the Delta. In addition, Delta farmers and irrigation districts also have rights to irrigate with water taken directly from Delta sloughs and channels.

Because the Delta drains the Sacramento River and San Joaquin River watersheds, storm runoff and waste discharges from upstream and adjacent areas enter into the Delta waterways and cause water quality problems. Lowflow years generally carry higher concentrations of waste discharges and agricultural runoff and drainage than do wet years.

Some treated municipal and industrial wastewater, untreated urban storm water and agricultural runoff and drainage enter the Delta directly. Other urban and agricultural discharges from upstream in the watershed enter the Delta along with the river flows. Seepage onto Delta islands from adjacent channels and drainage from the agricultural lands are released back to the Delta channels at hundreds of locations.

The Central Valley Regional Water Quality Control Board has identified the

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

million acre feet per year from the Delta, which supplies primarily urban uses but also supplies agricultural use south of the Delta. The and the CVP has contracts to divert federal project another 3.3 million acre feet per year., which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. On average, the projects together export about 5 million acre feet annually.

Comment: Not new, just moved up from below for better organization

SLC:

Delete this entire paragraph.

Comment: This information is already summarized in the previous paragraph—suggest deleting

San Joaquin Farm Bureau:

Comment: Should insert the word "urban" to clarify the types of runoff occurring, not just agricultural sources.

San Joaquin Farm Bureau:

Comment: Clarification [needed] on whether we're calling this a salt water estuary, or a fresh water estuary. T is clear that the Delta has suffered higher than normal saline intrusions since the implementation of State Water project and the operation of the pumps. Since, reclamation uses indicate this ws a fresh water Delta with islands with salt intolerant plants, and abundance of farming in the western edges of the Delta.

adjacent areas enter Delta waterways and cause water quality problems. Lowflow years generally carry higher concentrations of waste discharges and agricultural runoff and drainage than do wet years.

Some treated municipal and industrial wastewater, untreated urban storm water, and agricultural runoff and drainage enter the Delta directly. Other urban and agricultural discharges from upstream in the watershed enter the Delta along with the river flows. Seepage onto Delta islands from adjacent channels and drainage from the agricultural lands are released back to the Delta channels at hundreds of locations.

The Central Valley Regional Water Quality Control Board has identified the Delta as impaired by a number of pollutants, including some pesticides, low dissolved oxygen, electrical conductivity (salinity), and mercury (naturally occurring in the Cache Creek watershed, as well as a legacy of the large-scale hydraulic mining of the Sierra Nevada in the late 1800s). Designation as an impaired water body by the Board, relevant to certain water quality criteria or other stressors, is variable depending on portions of the watershed within the Delta. Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat the fish on a regular basis. As of 2009, the Board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and is developing a TMDL for methylmercury in the Delta.

The daily tidal cycles and the San Joaquin River contribute most of the salinity to the Delta. During periods of high Delta inflows, salinity is low; during periods of low Delta inflows, the salinity level rises. Salinity in the Delta is managed by a mix of releases from upstream reservoirs, Cross Channel Gate operations, Delta outflow, and exports from the Delta. The Delta is governed by water quality standards for municipal and industrial uses, agricultural uses, and fish and wildlife, all of which are currently under review by the State Water Resources Control Board. The combination of organic matter (decaying vegetation), bromide in the seawater, and disinfectants used in water treatment plants produce disinfection byproducts that may pose heath risks.

The State Water Resources Control Board and the Regional Boards designate beneficial uses of the State's waters. In the Delta, beneficial uses include: municipal and domestic supply; agriculture; industry; groundwater recharge; navigation; recreation; wildlife habitat; fish migration and spawning; and preservation of rare and endangered species.

DWR:

The Central Valley Regional Water Quality Control Board has identified the Delta as impaired by a number of pollutants, <u>including some pesticides</u>, low

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

Delta as impaired by a number of pollutants, low dissolved oxygen, electrical conductivity (salinity), and mercury. Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat the fish on a regular basis. As of 2009, the board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and is developing a TMDL for methylmercury in the Delta.

as an impaired water body by the Board, relevant to certain water quality criteria or other stressors, is variable depending on the watershed portion of the Delta. Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat the fish on a regular basis. As of 2009, t. The board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and is developing a TMDL for methylmercury in the Delta. Comment: Section 303(d) of the Clean Water Act relating to water-quality-limited segments of the Delta is very complex and the Delta watershed is divided into eight separate 'portions'. Listing of these portions of the watershed as water quality limited varies by pollutant/stressor depending where you are in the Delta. DWR recommends the above language to more accurately describe the issue.

dissolved oxygen, electrical conductivity (salinity), and mercury. Designation

SLC:

The Central Valley Regional Water Quality Control Board has identified the Delta as impaired by a number of pollutants, low dissolved oxygen, electrical conductivity (salinity), and mercury (naturally occurring in the Cache Creek watershed, as well as, a legacy of the large-scle hydraulic mining of the Sierra in the late 1800s). Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat the fish on a regular basis. As of 2009, the board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and is developing a TMDL for methylmercury in the Delta.

Comment: Referenced needed as to source of mercury

Comment: Need to add date.

The daily tidal cycles and the San Joaquin River contribute most of the salinity to the Delta. During periods of high Delta inflows, salinity is low; during periods of low Delta inflows, the salinity level rises. Salinity in the Delta is managed by a mix of releases from upstream reservoirs, Cross Channel Gate operations, Delta outflow, and exports from the Delta. The Delta is governed by water quality standards for municipal and industrial uses, agricultural uses, and fish and wildlife. The combination of organic matter (decaying vegetation), bromide in the seawater, and disinfectants used in water treatment plants produce disinfection byproducts that may pose heath risks.

Water quality in the Delta is regulated by the Regional Water Quality Control Boards through permit review of "point" discharges, such as discharges of treated water from sewage treatment plants and discharges to land. Water quality concerns related to drinking water include salinity intrusion, wastewater discharges, agricultural drainage water, trihalomethane precursor formation, and

DFG:

The Delta is governed by water quality standards for municipal and industrial uses, agricultural uses, and fish and wildlife, all of which are currently under review by the State Water Resources Control Board. The combination of organic matter (decaying vegetation), bromide in the seawater, and disinfectants used in water treatment plants produce disinfection byproducts that may pose heath risks.

Black = original Management Plan text

 $\underline{\text{Red}}$ = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

untreated stormdrain water.

The State Water Resources Control Board and the Regional Boards also designate beneficial uses of the State's waters. In the Delta, beneficial uses include: municipal and domestic supply; agriculture; industry; groundwater recharge; navigation; recreation; wildlife habitat; fish migration and spawning; and preservation of rare and endangered species.

During low flow and drought conditions, increased salinity of water of the western Delta can have a detrimental effect on agriculture in the area as well as the quality of drinking water supplies.

Water is being applied to some Delta lands to restore wetland habitats. This includes some areas proposed for permanent wetland status and thousands of acres of seasonally-flooded agricultural lands. Application of water can also result in enhanced habitat for mosquitoes, a recognized pest and health hazard.

Recreation & Access

The Delta is a unique geographic region which provides opportunities for water-oriented recreation, such as boating, and resource-oriented recreation, such as fishing and hunting. Many of the users are residents of communities in the Secondary Zone and beyond; some are local residents. Boaters come from the greater Bay Area and from other parts of the State to visit the Delta. Many visitors come from out of the area and rent houseboats from local marinas. There are no current studies which document for the entire Delta, the number of recreational users, length of visit, dollars spent per visitor day, age, sex or ethnic background of visitors, or type of facilities needed to meet present and future visitor needs.

Navigable waterways in the Delta-Suisun are available for public access and currently make up the majority of recreational opportunities. Boating use totals more than 6.4 million visitor days annually, composed of 2.13 million annual boat trips in the larger Delta-Suisun area. In 1998, people were estimated to have spent about \$378 million for Delta-oriented boating and fishing recreation. The majority of the land within the Delta is privately owned, which reduces the availability of land-based recreation.

DWR:

Navigable waterways in the Delta-Suisun <u>area</u> are available for public access and currently make up the majority of recreational opportunities.

SLC:

Coment: date and citation needed.

The Delta is a unique geographic region that provides exceptional recreational opportunities including boating, fishing, hunting, hiking, biking, camping, and wildlife viewing. Recreational users originate from both within and outside of the Delta. Many of the visitors value the wide expanses of open land, interlaced waterways, historic towns, and the feeling of a slower pace of life within the Delta.

Navigable waterways in the Delta-Suisun area are publicly accessible and currently constitute the majority of the recreational opportunities within the Delta. Boating use totals more than 6.4 million visitor days annually, composed of 2.13 million annual boat trips in the larger Delta-Suisun area (*Status and Trends of Delta-Suisun Service*, California Department of Water Resources, May 2007). The Aquatic Recreation Component of the Delta Recreation Strategy Plan prepared by the Delta Protection Commission forecasts demand for boating recreation through 2020 and identifies a deficit of facilities.

Most of the recreational facilities within the Delta are provided through private marinas. Several thousand boat berths are located in the Primary Zone, almost equally allocated among Contra Costa, Sacramento, and San Joaquin counties. Private facilities also provide launching facilities, recreational vehicle and tent

Black = original Management Plan text

Red = proposed insertions
Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

Many value the recreational opportunities in the Delta because the area is so different from the surrounding urbanized areas. Wide expanses of open land, interlaced waterways, historic towns, and the feeling of a slower pace of life make the Delta attractive to many visitors. The area provides unique scenic opportunities. An estimated 7,000 sandhill cranes make Delta agricultural fields their seasonal home.

The newly created Aquatic Recreation Component of the Delta Recreation Strategy Plan prepared by the Delta Protection Commission forecasts demand for boating recreation through 2020 and identifies a deficit of facilities based on current inventory and trends in increasing population. The plan predicts a 27 percent increase in annual boating visitor days from 6.4 million to 8.1 million. Current facilities and businesses cannot accommodate this increased demand.

Senate Bill 1556, signed by the Governor in September 2006, creates a California Delta Trail and requires the Delta Protection Commission to create a plan for designing, constructing, and maintaining this trail. The California Delta Trail will be a bike, pedestrian and equine trail system and recreation corridor along more than 1,000 miles of Delta waterfront in Contra Costa, San Joaquin, Sacramento, Yolo, and Solano counties. The trail will connect with the 450-mile San Francisco Bay Trail and will provide more land access to the Delta. The trail could increase demand for Delta-related land-based facilities like campsites, picnic areas, and restrooms.

Most of the recreation facilities within the Delta are provided through private marinas. Several thousand boat berths are located in the Primary Zone, almost equally divided between Contra Costa, Sacramento, and San Joaquin Counties. Private facilities also provide launching facilities, RV and tent camping, picnicking, restaurants, and bait and tackle shops. Waterskiing and riding Personal Water Craft (PWC)* are popular water-oriented activities.

Public parks are limited in number. There are five fishing access/launching facilities owned by Department of Fish and Game and managed by Sacramento and Yolo Counties. San Joaquin County provides land and water access at Westgate Park. Brannan Island State Park Recreation Area provides: boat

SLC:

An estimated 7,000 sandhill cranes make Delta agricultural fields their seasonal

Comment: I understand the link to recreation, but is out of place in this section.

DFG:

An estimated 7,000 sandhill cranes make Delta agricultural fields their seasonal home.

Comment: This sentence seems out of place here.

SLC:

Comment: shorten (entire paragraph) —too much detail

SLC:

Comment: shorten (entire paragraph) —too much detail

camping, picnicking, restaurants, and bait and tackle shops. Waterskiing and riding Personal Water Craft (PWC)⁵ are popular water-oriented activities.

The majority of the land within the Delta is privately owned, which reduces the availability of land-based recreation. Five fishing access/launching facilities owned by the California Department of Fish and Game and managed by Sacramento and Yolo counties are located within the Delta. San Joaquin County provides land and water access at Westgate Park. Brannan Island State Recreation Area provides boat launching, camping, swimming, nature interpretation, and wind surfing. Hunting occurs mainly on private lands; although some hunting is allowed on State- and federally-owned lands and waterways.

Concerns regarding existing and future recreational activities within the Delta include compatibility with agricultural operations and other private property uses, funding availability for the long-term maintenance and supervision of existing recreational facilities and for the development of new recreational facilities, compatibility with wildlife uses and levee maintenance requirements, overuse of existing facilities and popular waterways, the abandonment of vessels and other debris within Delta waterways, and increased demands on law enforcement and other emergency response providers.

Opportunities are available for new recreational facilities to be provided within the Delta on publicly-owned land. Examples include pedestrian access on publicly-owned levees adjacent to Brannan Island State Recreation Area; construction of new visitor facilities, interpretive facilities and trails at the Stone Lake National Wildlife Refuge; and pedestrian trails, visitor facilities, and water access facilities at the Delta Meadows Project.

In addition, Senate Bill 1556, signed by the Governor in September 2006, creates a California Delta Trail and requires the Delta Protection Commission to create a plan for designing, constructing, and maintaining this trail. The California Delta Trail is planned to be a bike, pedestrian and equine trail system and recreation corridor along more than 1,000 miles of Delta waterfront that will connect with the 450-mile San Francisco Bay Trail.

Black = original Management Plan text

Red = proposed insertions
Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary
Purple = DPC staff comments made for clarification

⁵ "Personal Water Craft" (PWC) is the general term for a broad range of small, powered boats that typically carry one or two persons, and are popularly known by registered tradenames such as Jet Ski, Ski Doo, etc.

Management Plan Update – Overview & Chapter Introduction Components

launching; camping; swimming; nature interpretation; and wind surfing.

Hunting occurs mainly on private lands and clubs; some hunting is allowed on State-owned lands and water areas. Facilities for Delta residents are located in the towns and at local schools. Locally-sponsored festivals in Isleton, Walnut Grove, and Courtland bring visitors into the Delta during the summer months.

Most of the Delta land areas are privately owned and used for agriculture. Some recreational users abuse private lands by littering, trespassing, picking fruit or vegetables from the fields, vandalizing pumps or other farm equipment, hunting or fishing in violation of State laws, or by driving on unpaved levee roads not suitable for automobile use.

Bank fishing is a popular Delta activity with few formal support facilities. The fisherman park alongside and on public and private roads, occasionally creating a safety hazard. Virtually no garbage or restroom facilities are available.

Concerns have been raised that boating activities create vessel wakes that damage levees, and that boating and PWC activity disturbs wildlife living in the sloughs and waterways. There is no regulation of the number of vessels using the Delta waterways and there is concern that some areas of the Delta have reached maximum capacity for some water-oriented recreational activities. For example, quiet boat fishing does not mix may not be compatible with PWC activity or waterskiing.

Protection of public safety and compliance with boating and fish and game laws are carried out by peace officers in a number of agencies including Coast Guard, State Department of Parks and Recreation, State Department of Fish and Game, and County Sheriffs' <u>land and Mm</u>arine <u>Ppatrols</u> (see page 50). Due to financial cutbacks, most County marine patrol programs have been reduced.

New recreational facilities could be provided at low cost on publicly-owned land where those lands will be supervised. Examples include: pedestrian access on publicly-owned levees adjacent to Brannan Island State Recreation Area; construction of new visitor facilities, interpretive facilities and trails at the proposed Stone Lake National Wildlife Refuge; and pedestrian trails, visitor

Topper van Loben Sels & Russell van Loben Sels

(Delta Landowners/Residents):

Hunting occurs mainly on private lands and clubs; some hunting is allowed on State and Federally owned lands and water areas.

[Topper van Loben Sels also submitted this comment individually]

DFG:

Hunting occurs mainly on private lands and clubs; some hunting is allowed on State- and federal-owned lands and water areas.

SLC:

Delete entire paragraph.

Comment: These statements do not belong in the management plan. The plan should state, in positive terms, what can be done to accommodate and increase recreational opportunities, which is a public trust issue.

SLC:

Delete entire paragraph.

Comment: These statements do not belong in the management plan. The plan should state, in positive terms, what can be done to accommodate and increase recreational opportunities, which is a public trust issue.

Black = original Management Plan text

 $\underline{\text{Red}}$ = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

facilities, and facilities to allow access from the water to the land at the Delta Meadows ProjectRiver Park.

As local governments authorize new or remodeled private commercial recreation facilities, use of appropriate design can minimize conflicts between Delta user groups and provide stronger identity for Delta facilities.

*"Personal Water Craft" (PWC) is the general term for a broad range of small, powered boats that typically carry one or two persons, and are popularly known by registered tradenames such as Jet Ski, Ski Doo, etc.

DFG:

Comment: This should be a footnote separate from the rest of the text.

Levees

The Delta is the natural drain for a watershed that includes the Central Valley and the western slope of the Sierra Nevada from Fresno to Mount Shasta. Existing flood management and water supply facilities (dams, levees, and bypasses) throughout the watershed influence floodflows to the Delta. Settlers began to farm the rich lands of the Delta by the 1850s. They built low levees to allow land to be drained for farming. Few of these levees were built using modern engineering techniques, and many rest on peat foundations that have settled with the added weight.

The main flood management facilities in the Delta include the approximately 1,100 miles of levees and the Yolo Bypass. The Yolo Bypass, with about 500,000 cubic feet per second (cfs) capacity, was designed to flood occasionally to relieve high water stages on the Sacramento River. Easements held by the Central Valley Flood Protection Board provide the right to inundate the land, including some islands such as Liberty Island, with floodwaters. The lower Sacramento ship channel and the Stockton ship channel provide some flood-carrying capability. Dredging to enlarge Delta channels used to be an important element of flood management.

Levees can fail for various reasons, including the burrowing activities of animals, erosion (from high flow events, wind-induced waves, and boat wakes) overtopping, deferred maintenance, seepage through sand layers underlying levee foundations, and other causes not yet well understood.

SLC:

The Delta is the natural drain for a watershed that includes the Central Valley, and the western slope of the Sierra Nevada from Fresno to Mount Shasta, <u>and</u> the easter slope of the Coast Range from X to X.

Comment: What about the other side of the valley

Topper van Loben Sels & Russell van Loben Sels

(Delta Landowners/Residents):

Dredging to enlarge <u>and clean</u> Delta channels used to be an important element of flood management.

[Topper van Loben Sels also submitted this comment individually]

DWR

Levees can fail for various reasons, including the burrowing activities of animals, erosion (from high flow events, wind-induced waves, and boat wakes), overtopping, deferred maintenance, seepage through sand layers underlying levee foundations, slope stability and other causes not yet well understood.

SLC:

Levees can fail for various reasons, including the burrowing activities of animals, erosion (from high flow events, wind-induced waves, and boat wakes), overtopping, deferred maintenance, seepage through sand layers underlying

The Delta is the natural drain for a watershed that includes the Central Valley and the western slope of the Sierra Nevada from Fresno to Mount Shasta. Existing flood management and water supply facilities (dams, levees, and bypasses) throughout the watershed influence floodflows to the Delta. Settlers began to farm the rich lands of the Delta by the 1850s. They built low levees to allow land to be drained for farming. Few of these levees were built using modern engineering techniques, and many rest on peat foundations that have settled with the added weight.

The main flood management facilities in the Delta include the approximately 1,100 miles of levees and the Yolo Bypass. The Yolo Bypass, with about 500,000 cubic feet per second (cfs) capacity, was designed to flood occasionally to relieve high water stages on the Sacramento River. Easements held by the Central Valley Flood Protection Board provide the right to inundate the land, including some islands such as Liberty Island, with floodwaters. The lower Sacramento ship channel and the Stockton ship channel provide some flood-carrying capability. Dredging to enlarge and clean Delta channels use to be an important element of flood management.

Levees can fail for various reasons including the burrowing activities of animals, erosion (from high flow events, wind-induced waves, and boat wakes), overtopping, deferred maintenance, seepage through sand layers underlying levee foundations, slope stability and other causes not yet well understood.

Delta levees face risk of high water overtopping during the wet season (winter and spring), particularly when large storms coincide with high tides. Storms contribute to the levee overtopping risk by increasing water levels in the rivers and creating wind-induced waves. In addition, the low barometric pressures associated with large storms raise water surface levels in Delta and Suisun Marsh channels. In many cases, the flooding of the islands has been costly to local residents and farmers and to the state as a whole.

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

Delta levees face risk of high water overtopping during the wet season (winter and spring), particularly when large storms coincide with high tides. Storms contribute to the levee overtopping risk by increasing water levels in the rivers and creating wind-induced waves. In addition, the low barometric pressures associated with large storms raise water surface levels in Delta and Suisun Marsh channels. In many cases, the flooding of the islands has been costly to local residents and farmers and to the state as a whole.

The Central Valley Flood Protection Board has primary responsibility for flood management throughout the Central Valley on "project levees" that are part of an authorized federal flood control project. More than 700 miles, or 65 percent, of Delta levees are classified as "non-project" because they are not part of an authorized federal flood control project. These levees have been built and maintained by landowners or reclamation districts to protect agricultural lands.

In general, the levee work by reclamation districts is financed by the owners of the lands within the levees. Over the last 35 years, the State of California has provided supplemental financing for levee maintenance and emergency response through California Department of Water Resources' (DWR) Delta Levee Subventions Program. State law requires that the levee work be consistent with net long-term habitat improvement with net benefits to habitat in the Delta. In addition, DWR provides technical assistance to reclamation districts and coordinates flood fights when islands are threatened. Funding for these programs has been intermittent and unreliable.

levee foundations, <u>earthquakes</u>, and other causes not yet well understood. **Comment:** Seismic risk identified by DWR in 1992, CALFED in 2000, and most recently in DRMS in 2007.

DWR:

In general, the levee work by reclamation districts is financed by the owners of the lands within the levees. Over the last 35 years, the State of California has provided supplemental financing for levee maintenance, rehabilitation, improvements, and emergency response through California Department of Water Resources' (DWR) Delta Levee Subventions Program (Subventions and Delta Special Projects). State law requires that the levee work be consistent with net long-term habitat improvement with net benefits to aquatic habitat in the Delta. In addition, DWR provides technical assistance to reclamation districts and coordinates flood fights when islands are threatened. Funding for these programs has been intermittent and unreliable however, the Delta Levees Program, since its inception, has provided over \$200 million in local assistance support for Delta levees. The Central Valley Flood Protection Board has approval authority over the Subvention Program funding.

Many levees in the Delta are subject to year-round loading. Consequently, the failure of these levees from an earthquake would result in immediate flooding of the islands they protect. DWR's Delta Risk Management Strategy has estimated that there is a 40 percent probability of a major earthquake causing 27 or more islands to flood simultaneously in a 25-year time period.

SLC:

In general, the levee work by reclamation districts is financed by the owners of the lands within the levees. Over the last 35 years, the State of California has provided about \$400 million supplemental financing for levee maintenance, repair, and improvement, and emergency repair and response through

The Central Valley Flood Protection Board has primary responsibility for flood management throughout the Central Valley on "project levees" that are part of an authorized federal flood control project. More than 700 miles, or 65 percent, of Delta levees are classified as "non-project" because they are not part of an authorized federal flood control project. These levees have been built and maintained by landowners or reclamation districts to protect agricultural lands.

In general, the levee work by reclamation districts is financed by the owners of the lands within the levees. Over the last 35 years, the State of California has provided approximately \$400 million in supplemental financing for levee maintenance, rehabilitation, improvements, and emergency response through the California Department of Water Resources' (DWR) Delta Levee Subventions Program (Subventions and Delta Special Projects). State law requires that the levee work be consistent with net long-term habitat improvement with net benefits to aquatic habitat in the Delta. In addition, DWR provides technical assistance to reclamation districts and coordinates flood fights when islands are threatened. Funding for these programs has been intermittent and unreliable; however, the Delta Levees Program, since its inception, has provided over \$200 million in local assistance support for Delta levees. The Central Valley Flood Protection Board has approval authority over the Subvention Program funding.

The levee maintenance work is critical to maintain water quality in the Delta, to protect life and property, and to protect upland wildlife habitat. The maintenance of Delta levees is necessary to protect human life, to provide flood protection, to protect private and public property, to protect historic structures and communities, to protect riparian and upland habitat, to promote interstate and intrastate commerce, to protect water quality for the State and federal water projects, and to protect recreational use of the Delta area. Therefore, Delta levee maintenance, rehabilitation, and improvement (including seismic strengthening where appropriate) needs to be given priority over other uses of the levee areas.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

intermittent and unreliable. **Comment:** Redundant phrase

Constructed levees are the key physical element which create and maintain the Delta as we know it today, allowing draining of the low-lying lands for agriculture. The levees protect human life and existing structures from flooding, define channels used for commercial navigation, create the Yolo Bypass, part of a regional flood control project, protect the upland habitat areas on the islands, and protect Delta water quality.

Largely due to subsidence, the failure of levees would result in flooded areas of substantial depths. Flood levels of fifteen (15) to twenty (20) feet can be expected at some locations. Due to wind and boat wave action, even the levee remnants and the habitat thereon will be eroded away as a result of a levee failure. Inundated areas will be similar to the areas known as Franks Tract and Mildred Island but with greater water depths. When levees in the Delta fail, there is a tremendous loss of wildlife habitat within the particular area flooded and the habitat remaining on the levee remnants and in-channel islands is gradually eroded away. In addition to habitat losses, there is generally a significant loss of crops and destruction of farm equipment and farm buildings, and water quality impacts from petroleum products, herbicides, pesticides, and possible methylization of mercury.

There are also other impacts associated with levee failures in the Delta including, but not limited to, severe alteration of the aquatic habitat that should also be recognized and noted. The levees surrounding the eight western islands have been determined to be of significance in maintaining the efficiency of salinity repulsion. Without such levee systems in place, greater amounts of freshwater will be required to provide comparable levels of salinity repulsion.

California Department of Water Resources'(DWR) Delta Levee Flood Protection Program Over the last 35 years, the State of California has provided supplemental financing for levee maintenance and emergency response through California Department of Water Resources' (DWR) Delta Levee Subventions Program. State law requires that the levee work be consistent with net longterm habitat improvement with net benefits to habitat in the Delta. In addition, DWR provides technical assistance to reclamation districts and coordinates flood fights when islands are threatened. Funding for these programs has been

Comment: More appropriate statement and more representative of the facts.

Comment: Delete in favor of the previous funding statement

DFG:

When levees in the Delta fail, there is may be a tremendous loss of wildlife habitat within the

SLC:

When levees in the Delta fail, there is a tremendous loss of wildlife habitat within the particular area flooded and the habitat remaining on the levee remnants and in channel islands is gradually eroded away. In addition to habitat losses, there is generally a significant loss of crops and destruction of farm equipment and farm buildings, and water quality impacts from petroleum oducts, herbicides, pesticides, and possible methylization of mercury. **Comment:** Redundant. Delete in favor of the sentences identified below (in next two SLC comments)

Black = original Management Plan text

Red = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

When an island floods, due to the higher evaporation rate of flooded areas, more freshwater is lost to the atmosphere than would be used had the island been farmed. The result is an additional loss of about two acre feet per acre per year. This freshwater loss could be very significant if broad areas of the Delta were permanently flooded.

The levees were originally built by individual landowners to provide flood control. Later, reclamation districts were created which allowed the landowners in an area to assess themselves to build levees which benefited the group as a whole. These levees were not built to a common standard and are called "non-project levees" or "local levees". "Project levees" or "federal levees" were designed and built by a federal agency as part of a flood control or shipping channel project and are maintained by the State or a local agency. Some locally constructed levees were subsequently adopted as federal levees.

Different standards have been adopted in the past regarding the growth and removal of vegetation on the levees. The construction oriented agencies support vegetation control to allow maximum surveillance of the levees. Wildlife agencies promote growth of riparian vegetation to provide wildlife habitat. Agencies have recently adopted a new common standard.

While early levees were built to different heights and cross-sections, programs now require that non-project (local) levees at least meet the State's Flood Hazard Mitigation Plan standards to be eligible for federal financial assistance in case of a flood. The standard requires a levee crown elevation one foot above the 100 year flood elevation. In addition, to be eligible for Corps assistance in a Presidentially declared Delta emergency, levees must meet or be able to show attempts to meet the PL-99 standard. The PL-99 Standard requires a levee crown elevation 1.5 feet above the 100 year flood elevation.

Most levees were constructed from materials dredged from low-lying edges of islands, or adjacent channels. Emergency levee repairs have required importation of large amounts of riprap and other materials. Due to current concerns about the impacts of clamshell dredging on endangered fish species and water quality, dredging for levee maintenance has slowed. Other sources of material for levee maintenance are borrowed from island deposits or imported into the Delta.

Until the late 1970's, a significant portion of levee construction and maintenance costs were borne by the landowners. Under conditions, special funds from both State and federal programs provided assistance in emergencies. The State currently provides some funds for levee maintenance of non project (local) levees. The State's current program, SB 34, is slated to sunset in 1999 and the monies in the program have varied from year to year. To continue high

Black = original Management Plan text

<u>Red</u> = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

levels of levee maintenance, funds from multiple sources should be earmarked for a new or continued, permanent levee maintenance program. In addition, funds should be earmarked and set aside for emergency levee repairs and reclamation of flooded islands, perhaps in an infrastructure bank.

Levee maintenance work is regulated by multiple State and federal agencies. The regulatory authority and mission of the agencies is overlapping and in some situations contradictory. The length of time required and the amount of specialized information needed to obtain permits adds a considerable amount to the per mile cost of levee maintenance. The levee maintenance work is critical to maintain water quality in the Delta, to protect life and property, and to protect upland wildlife habitat. Emergency floodfight is coordinated by Department of Water Resources (DWR) and the reclamation districts. In an emergency, DWR can help provide labor and other resources. After a levee break, the reclamation district must coordinate with federal agencies to receive assistance for levee repair and dewatering.

The maintenance of Delta levees is necessary to protect human life, to provide flood protection, to protect private and public property, to protect historic structures and communities, to protect riparian and upland habitat, to promote interstate and intrastate commerce, to protect water quality in the State and federal water projects, and to protect recreational use of the Delta area. Therefore, Delta levee maintenance and rehabilitation needs to be given priority over other uses of the levee areas.

Implementation

The Delta Protection Act of 1992 established the Delta Protection Commission, a new State entity to plan for and to guide the conservation and enhancement of the natural resources of the Delta, while sustaining agriculture and meeting increased recreational demand. The Act defines a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Secondary Zone is the area outside the Primary Zone and within the "Legal Delta"; the Secondary Zone is not within the planning area of the Delta

DWR:

The levee maintenance work is critical to maintain water quality in the Delta, to protect life and property, and to protect upland wildlife habitat. DWR's Delta Levee Program partners with the Department of Fish and Game to facilitate levee maintenance and rehabilitation work in the Delta.

Comment: Deleting this sentence because it is included in the following

SLC:

paragraph.

Levee maintenance work is regulated by multiple State and federal agencies. The regulatory authority and mission of the agencies is overlapping and in some situations contradictory. The length of time required and the amount of specialized information needed to obtain permits adds a considerable amount to the per mile cost of levee maintenance. The levee maintenance work is critical to maintain water quality in the Delta, to protect life and property, and to protect upland wildlife habitat.

Comment: This sentence says it better

SLC:

Comment: And this paragraph sums it up nicely.

DWR:

Therefore, Delta levee maintenance, and rehabilitation, and improvement (including seismic strengthening where appropriate) needs to be given priority over other uses of the levee areas.

<u> VR:</u>

Comment: Recommend this be moved to the beginning of the document.

For purposes of policy implementation, the Commission's duties may be characterized as including planning, conservation, and coordinating functions. The Delta Protection Act provides broad authority to the Commission to plan for the stated legislative goals of maintaining agricultural lands and natural resources in the Delta, while increasing recreation opportunities and public access.

Black = original Management Plan text

 $\underline{\text{Red}}$ = proposed insertions

Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

Protection Commission. The Act requires the Commission to prepare and adopt a Land Use and Resource Management Plan for the Delta, which must meet specific goals.

For purposes of implementation issues, the Commission's duties may be characterized as including planning, conservation, and coordinating functions. The Act provides broad authority to the Commission to plan for the stated legislative goals of maintaining agricultural lands and natural resources in the Delta, while increasing recreation opportunities and public access.

In order to achieve these important goals, as measured against current baseline conditions, the Legislature has determined that local plans and decisions must be in conformance with the Commission's Plan and local decisions will be subject to appellate review by the Commission. The use of and consistently applied policies, subject to administrative review for conformance with the Act and Plan, will be helpful in achieving the goals of orderly and balanced conservation and development of Delta resources.

In view of the "sunset" clause in the Delta Protection Act, as to options for agency structure, the Commission may consider whether to recommend continuing in its current form, continuing in a revised form, and/or forming a separate or companion agency, such as a Conservancy or a resource conservation district, and/or let the "sunset" clause take effect.

Options available to the Commission to achieve the goals set forth in the Delta Protection Act of 1992 include:

A regional database with baseline conditions and a resource management plan with sufficiently specific standards and criteria in order to measure change, to evaluate progress, and to prepare the required annual reports to the Legislature.

A continuing planning effort, including review of local General Plan proposals, preparation of Plan updates, and consideration of future General Plan amendments in order to assure an effective, accurate, and dynamic resource management plan.

Continuing oversight of local development approvals as a means of assuring consistent implementation of the Commission's Plan, a function currently served by the Commission's appellate review duties.

An acquisition and management strategy for the voluntary acquisition of

DWR:

The <u>Delta Protection</u> Act provides broad authority to the Commission to plan for the stated legislative goals of maintaining agricultural lands and natural resources in the Delta, while increasing recreation opportunities and public access

DWR:

In order to achieve these important goals, as measured against current baseline conditions, the State Legislature has determined that local plans and decisions must

In order to achieve these important goals, as measured against current baseline conditions, the State Legislature has determined that local plans and decisions must be in conformance with the Plan and that local decisions are subject to appellate review by the Commission. The consistent application of policies, subject to administrative review for conformance with the Act and Plan, will help achieve the goals of orderly and balanced conservation and development of Delta resources.

Options available to the Commission to achieve the goals set forth in the Delta Protection Act of 1992 include:

- A regional database with baseline conditions and a resource management plan with sufficiently specific standards and criteria in order to measure change, to evaluate progress, and to prepare the required annual reports to the Legislature.
- A continuing planning effort, including review of local general plan
 proposals, preparation of general plan updates, and consideration of
 future general plan amendments in order to assure an effective,
 accurate, and dynamic resource management plan.
- Continuing oversight of local development approvals as a means of assuring consistent implementation of the Plan, a function currently served by the Commission's appellate review duties.
- An acquisition and management strategy for the voluntary acquisition
 of appropriate interests (conservation easements) in real property and
 for efficient management and economical support for related
 agricultural activities and habitat protection.
- Coordination of the activities of various State and local agencies and non-profit organizations to provide an integrated stewardship scheme for Delta resources, to coordinate marina patrol activities, and to provide a database to facilitate resource protection, recreational uses, and sustained agricultural activity in the Delta.

From these many options that are available, numerous combinations are possible. In addition to the various elements of the Plan, the Commission could create partnerships with existing agencies and organizations or form new entities, both of which would be helpful in achieving the goals of the Act. The Commission may recommend strengthening its planning and review functions, or emphasizing conservancy functions, or both. The Commission's recommendations can inform legislative consideration and review of the Act.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

appropriate interests (conservation easements) in real property and for efficient management and economical support for related agricultural activities and habitat protection.

Coordination of the activities of various State and local agencies and non-profit organizations to provide an integrated stewardship scheme for Delta resources, to coordinate marina patrol activities, and to provide a database to facilitate resource protection, recreational uses, and sustained agricultural activity in the Delta.

From these many options that are available, numerous combinations are possible. In addition to the various elements of the Commission's Plan, the Commission could create partnerships with existing agencies and organizations, or the formation of new entities, would be helpful in achieving the goals of the Act. The Commission may recommend strengthening its planning and review functions, or emphasizing conservancy functions, or both. The Commission's recommendations can inform legislative consideration and review of the Act, which will be prompted by its "sunset clause".

A. Description of Local Government Responsibilities under the Delta Protection Act of 1992.

1. Prepare and Submit Local Plan. Within 180 days of the adoption of the regional plan, all local governments shall submit to the Commission proposed amendments which will cause their General Plans for the areas in the Primary Zone to be consistent with the criteria in Section 29763.5 (see below)(Section 29763).

The local governments can adopt the language in the Commission adopted Plan as a special area plan for the Delta area of the County, the local governments can identify which policies in their existing General Plans carry out the policies in the Commission adopted plan, or can prepare and submit a special area plan of their own for the Delta area of the County.

The Commission's adopted Plan is intended to be used as a guide to the local governments to ensure that certain policy areas are addressed within each local government General Plan and to ensure that uniform policies are adopted Deltawide for certain policy areas.

The local governments must ensure that when adopted, the General Plans, and any development approved or proposed that is consistent with the General Plan, will be consistent with the regional plan and will E. Description of Local Government Responsibilities under the Delta Protection Act of 1992.

1. Prepare and Submit Local Plan. Within 180 days of the adoption of the regional plan, all local governments shall submit to the Commission proposed amendments which will cause their General Plans for the areas in the Primary Zone to be consistent with the criteria in Section 29763.5 (see below)(Section 29763).

The local governments can adopt the language in the Commission adopted Plan as a special area plan for the Delta area of the County, the local governments can identify which policies in their existing General Plans carry out the policies in the Commission adopted plan, or can prepare and submit a special area plan of their own for the Delta area of the County.

The Commission's adopted Plan is intended to be used as a guide to the local governments to ensure that certain policy areas are addressed within each local government General Plan and to ensure that uniform policies are adopted Deltawide for certain policy areas.

The local governments must ensure that when adopted, the General Plans, and any development approved or proposed that is consistent with the General Plan, will be consistent with the regional plan and will not (Section 29763.5):

- result in wetland or riparian loss;
- result in degradation of water quality;
- result in increased nonpoint source pollution;
- result in the degradation or reduction of Pacific Flyway habitat;
- result in reduced public access, provided the access does not infringe on private property rights;
- expose the public to increased flood hazard;
- adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public private nuisance on public or private land;

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

not (Section 29763.5):

- result in wetland or riparian loss;
- result in degradation of water quality;
- result in increased nonpoint source pollution;
- result in the degradation or reduction of Pacific Flyway habitat;
- result in reduced public access, provided the access does not infringe on private property rights;
- expose the public to increased flood hazard;
- adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public private nuisance on public or private land;
- result in the degradation or impairment of levee integrity;
- result in increased requirements or restrictions upon agricultural practices in the Primary Zone.

These are also the criteria the Commission will use to evaluate the plans submitted by the local governments.

2. Amend Local Government General Plans. Upon approval by the Commission of the proposed General Plan amendments of the local governments, the local governments shall adopt the proposed General Plan amendments within 120 days of that approval.

The Delta Protection Act amends Section 21080.22 of the Public Resources Code to exempt the "activities and approvals by a local government necessary for the preparation of General Plan amendments" from the California Environmental Quality Act.

- 3. Local Government Implementation of the Act. Prior to adoption of the General Plan amendments, local governments that approve developments in the Primary Zone must adopt a series of findings that the development will not result in:
 - wetland or riparian loss;

- result in the degradation or impairment of levee integrity;
- result in increased requirements or restrictions upon agricultural practices in the Primary Zone.

These are also the criteria the Commission will use to evaluate the plans submitted by the local governments.

2. Amend Local Government General Plans. Upon approval by the Commission of the proposed General Plan amendments of the local governments, the local governments shall adopt the proposed General Plan amendments within 120 days of that approval.

The Delta Protection Act amends Section 21080.22 of the Public Resources Code to exempt the "activities and approvals by a local government necessary for the preparation of General Plan amendments" from the California Environmental Quality Act.

- 3. Local Government Implementation of the Act. Prior to adoption of the General Plan amendments, local governments that approve developments in the Primary Zone must adopt a series of findings that the development will not result in:
 - wetland or riparian loss;
 - degradation of water quality;
 - increased nonpoint source pollution or soil erosion, including subsidence or sedimentation;
 - degradation or reduction of Pacific Flyway habitat;
 - reduced public access, provided that access does not infringe upon private property rights;
 - expose the public to increased flood hazards;
 - adversely impacts agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisances on private or public lands;
 - degradation or impairment of levee integrity;
 - adversely impact navigation;

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

- degradation of water quality;
- increased nonpoint source pollution or soil erosion, including subsidence or sedimentation;
- degradation or reduction of Pacific Flyway habitat;
- reduced public access, provided that access does not infringe upon private property rights;
- expose the public to increased flood hazards;
- adversely impacts agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisances on private or public lands;
- degradation or impairment of levee integrity;
- adversely impact navigation;
- any increased requirements or restriction upon agricultural practices in the primary zone.

After the General Plan amendments are adopted, the local governments will approve development in the Primary Zone based on the amended General Plans.

- B. Description of Delta Protection Commission Responsibilities under the Delta Protection Act of 1992.
 - 1. Adopt Regional Plan for the Delta Primary Zone. The Commission must prepare and adopt, and thereafter review and maintain a comprehensive, long-term resource management plan for land uses within the Primary Zone of the Delta by October 1, 1994 (Section 29706(a)).
 - 1.2. Review and Act on Proposed Local Government General Plan Amendments. The Commission shall act on the proposed General Plan amendments submitted by local governments within 60 days of receiving the proposed amendments. The criteria for approving the proposed General Plan amendments are described in A-1, above. The findings must be written, and based on substantial evidence in the record (Section 29763.5).
 - 1.3. Meet California Environmental Quality Act (CEQA) Requirements.

 any increased requirements or restriction upon agricultural practices in the primary zone.

After the General Plan amendments are adopted, the local governments will approve development in the Primary Zone based on the amended General Plans.

- F. Description of Delta Protection Commission Responsibilities under the Delta Protection Act of 1992.
 - 1. Adopt Regional Plan for the Delta Primary Zone. The Commission must prepare and adopt, and thereafter review and maintain a comprehensive, long-term resource management plan for land uses within the Primary Zone of the Delta by October 1, 1994 (Section 29706(a)).
 - 2. Review and Act on Proposed Local Government General Plan Amendments. The Commission shall act on the proposed General Plan amendments submitted by local governments within 60 days of receiving the proposed amendments. The criteria for approving the proposed General Plan amendments are described in A-1, above. The findings must be written, and based on substantial evidence in the record (Section 29763.5).
 - 3. Meet California Environmental Quality Act (CEQA) Requirements. The Commission must meet CEQA requirements when it approves the General Plan amendments prepared and submitted by local governments (Section 21080.22).
- 4. Maintain Appeal Authority. As set out in Section 29770 of the Act, the Commission currently has and will continue for the term of the legislation, to have appeal authority for "any person aggrieved by any action taken by a local government in implementing the regional plan or otherwise taken pursuant to this division". The Commission has adopted regulations governing such appeals. If an appeal is accepted, the local action is suspended until the Commission completes its review of the appealed matter. Upon remand, the local agency may modify the permit or approval and resubmit the matter for review to the Commission. The permit or approval shall not be effective until the Commission adopts written findings based on substantial evidence in the record that the permit or approval is consistent with the regional plan and the approved local General Plan.

Black = original Management Plan text

<u>Red</u> = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

The Commission must meet CEQA requirements when it approves the General Plan amendments prepared and submitted by local governments (Section 21080.22).

- 1.4. Maintain Appeal Authority. As set out in Section 29770 of the Act, the Commission currently has and will continue for the term of the legislation, to have appeal authority for "any person aggrieved by any action taken by a local government in implementing the regional plan or otherwise taken pursuant to this division". The Commission has adopted regulations governing such appeals. If an appeal is accepted, the local action is suspended until the Commission completes its review of the appealed matter. Upon remand, the local agency may modify the permit or approval and resubmit the matter for review to the Commission. The permit or approval shall not be effective until the Commission adopts written findings based on substantial evidence in the record that the permit or approval is consistent with the regional plan and the approved local General Plan.
- 1.5. Sunset. "Sunset" provision was deleted (2000).
- C. Development of Long-Term Implementation of Goals of Delta Protection Act of 1992
 - 1. Study Alternatives for Long Term Implementation. The Commission should consider holding a workshop and public hearing on the "tool box" of alternatives described in the Background Report on Implementation, prepared for the Commission by the Attorney General's office. The ranges of alternatives set out in the report include: sunset, extension of the existing legislation, creation of a different commission with a mission to carry out the goals of the original act, and other alternatives.
 - 2.1. Prepare Goals for New Legislation. If the Commission develops concepts for future legislation, adopt materials to forward to the Governor and the Legislature. Legislation to eliminate the sunset date was chaptered September 19, 2000.

D. Recommendations

1. Establish the <u>updated</u> Delta Plan as the regionwide policy to preserve, protect, enhance, and restore Delta resources. Because the Delta is a unique and valuable resource area in which all the people of the State have a substantial and continuing interest, and because the wise use, conservation and enhancement of the Delta natural resources are of great concern to the people of California, it should be the policy of the

DWR:

Comment: This recommendation appears to be recommending the current directive under the Delta Protection Act. As such, is could be deleted or

5. Sunset. "Sunset" provision was deleted (2000).

G. Development of Long-Term Implementation of Goals of Delta Protection Act of 1992

1. Prepare Goals for New Legislation. If the Commission develops concepts for future legislation, adopt materials to forward to the Governor and the Legislature. Legislation to eliminate the sunset date was chaptered September 19, 2000.

H. Recommendations

- 1. Continue implementation of the updated Delta Plan as the regionwide policy to preserve, protect, enhance, and restore Delta resources. Because the Delta is a unique and valuable resource area in which all the people of the State have a substantial and continuing interest, and because the wise use, conservation and enhancement of the Delta natural resources are of great concern to the people of California, it should be the policy of the State to recognize, preserve, protect and, where possible, enhance the resources of the Delta for the use and enjoyment of current and future generations.
- 2. Ensure the actions of the five Delta Counties, and other local governments proposed work in the Primary Zone, are consistent with the updated Delta Plan. The local governments are charged with regulatory authority in the Delta. Those regulatory responsibilities should be carried out in conformity with the updated Delta Plan. Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions should be carried out in conformity with the Delta Protection Act of 1992.
- 3. Continue to give the local governments with jurisdiction in the Delta Primary Zone responsibility for carrying out the updated Delta Plan through an amended County General Plan. Once the updated Plan has been adopted and the local governments have reviewed their General Plans for consistency with the updated Plan and amended the General Plans, the local governments should have primary responsibility for carrying out the updated Delta Plan.
- 4. Continue limited State responsibility for carrying out the updated Delta Plan through the appeal authority of the Delta Protection Commission. The Delta Protection Commission should continue to exercise its appeal authority over local government activities as delineated in the

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification

Management Plan Update – Overview & Chapter Introduction Components

State to recognize, preserve, protect and, where possible, enhance the resources of the Delta for the use and enjoyment of current and future generations.

- 1.2. Ensure the actions of the five Delta Counties, and other local governments proposed work in the Primary Zone, are consistent with the updated Delta Plan. The local governments are charged with regulatory authority in the Delta. Those regulatory responsibilities should be carried out in conformity with the updated Delta Plan. Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions should be carried out in conformity with the Delta Protection Act of 1992.
- 1.3. Continue to give the local governments with jurisdiction in the Delta Primary Zone responsibility for carrying out the updated Delta Plan through an amended County General Plan. Once the updated Plan has been adopted and the local governments have reviewed their General Plans for consistency with the updated Plan and amended the General Plans, the local governments should have primary responsibility for carrying out the updated Delta Plan.
- 1.4. Continue limited State responsibility for carrying out the <u>updated</u> Delta Plan through the appeal authority of the Delta Protection Commission. The Delta Protection Commission should continue to exercise its appeal authority over local government activities as delineated in the Delta Protection Act of 1992.
- 5. Develop a monitoring data base to review progress in achieving the objectives of the Delta Protection Act of 1992. The data base will provide information needed to evaluate the effectiveness of the regional plan in preserving agricultural lands, restoring Delta habitat, improving levee protection and water quality, and providing increased public access and recreational opportunities. This information must be provided to the Governor and Legislature as part of the annual reports which have been required to_must be submitted since starting January 1, 1995.

modified by replacing "Establish" to "Continue implementation of".

Delta Protection Act of 1992.

5. Develop a monitoring data base to review progress in achieving the objectives of the Delta Protection Act of 1992. The data base will provide information needed to evaluate the effectiveness of the regional plan in preserving agricultural lands, restoring Delta habitat, improving levee protection and water quality, and providing increased public access and recreational opportunities. This information must be provided to the Governor and Legislature as part of the annual reports which have been required to be submitted since January 1, 1995.

Black = original Management Plan text

Red = proposed insertions Red = proposed deletions

Shaded text = visual aid to assist in matching comments with Management Plan text

XXX = Agency/Organization/Individual authoring proposed changes/comments

Green = Agency/Organization/Individual commentary

Purple = DPC staff comments made for clarification